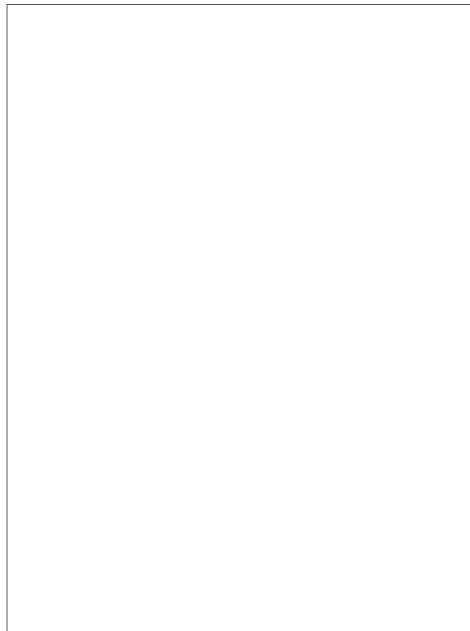




1 of 10

**NPIC DATA SYSTEM
DATA AND CONTROL SEGMENT
ACQUISITION PHASE**

**APPENDIX C3
WBS DICTIONARY**



STAT

31 March 1982

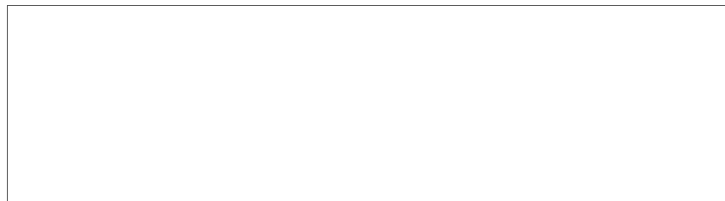
**NPIC DATA SYSTEM
DATA AND CONTROL SEGMENT
ACQUISITION PHASE**

**APPENDIX C3
WBS DICTIONARY**



STAT

31 March 1982



STAT

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
241000	4.1	Project Management	This category includes the project manager plus senior level managers for
641100	4.1.1	Provide Project Management Including NDPO Interface	Includes project management for BOC. This covers: Project Manager, Deputy Project Manager and Program Control Manager. It also includes related administrative/secretarial support.
641101	4.1.1	Provide Project Management Including NDPO Interface	Identical to 641100, except this element covers the FOC phase.
641102	4.1.1	Provide Project Management Including NDPO Interface	Identical to 641100 except this element covers the IOC phase.
641200	4.1.2	Monitor, Control and Report Schedule Status	Covers project control to monitor/control/report schedule status through BOC. Includes preparation of CDRL's 101, 103, 107, 110, 111, 113, 114. This element also includes Facility Planning Support and Data Management for Project Control Office and general administrative support.
641201	4.1.2	Monitor, Control and Report Schedule Status	Identical to 641200, except this element covers the IOC phase.
641202	4.1.2	Monitor, Control and Report Schedule Status	Identical to 641200, except this element covers for FOL phase.

STAT
STAT

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641203	4.1.2	Monitor, Control and Report Cost Status	This includes the effort to structure the contract consistent with 7000.2 requirements, program control reviews, monitoring of subcontracts and overall cost monitoring. This element covers the BOC phase and preparation of CDRL Items #102 and #109.
641204	4.1.2	Monitor, Control and Report Cost Status	Identical to 641203, except this element covers the IOC phase and preparation of CDRL #109 only.
641205	4.1.2	Monitor, Control and Report Cost Status	Identical to 641203, except this element covers the FOC phase and preparation of CDRL #109 only.
641300	4.1.3	Provide Quality Assurance Plan	Covers the production of the Quality Assurance Plan (CDRL #108).
641301	4.1.3	Implement Software Quality Assurance	This effort includes: QA program management; document inspection, design, development, and testing monitoring and control; corrective action monitoring; configuration assurance; design/code inspections monitoring; and contract adherence. This element covers the BOC phase.
641302	4.1.3	Implement Software Quality Assurance	Identical to 641301, except this element covers the IOC phase.
641303	4.1.3	Implement Software Quality Assurance	Identical to 641301, except this element covers the FOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641304	4.1.3	Implement Hardware Quality Assurance	This effort includes: participation in all reviews (PDR, CDR, etc.), CDRL review and approval; inspection plan preparation; procurement support; CCB participation; coordination with Data Processing Division on ADPE equipment; safety inspection coordination; and QA program management. This element covers the BOC phase.
641305	4.1.3	Implement Hardware Quality Assurance	Identical to 641304, except this element covers the IOC phase.
641306	4.1.3	Implement Hardware Quality Assurance	Identical to 641304, except this element covers the FOC phase.
641307	4.1.3	Monitor Subcontractor Quality Assurance	This covers the monitoring subcontractor Quality Assurance Plan and Program. This includes monitoring and auditing of the subcontractors QA program implementation including periodical visits and review of all work products. This element also covers as required assistance to the subcontractor in QA matters. This element covers the BOC phase.
641308	4.1.3	Monitor Subcontractor Quality Assurance	Identical to 641307, except this element covers the IOC phase.
641309	4.1.3	Monitor Subcontractor Quality Assurance	Identical to 641307, except this element covers the FOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641310	4.1.3	Provide QA Audit Reports	This element covers the preparation of the QA Audit Reports (CDRL #149) during the BOC phase. Does not include typist and technical publications effort associated with these reports.
641311	4.1.3	Provide QA Audit Reports	Identical to 641310, except this element covers the IOC phase.
641312	4.1.3	Provide QA Audit Reports	Identical to 641310, except this element covers the FOC phase.
641400	4.1.4	Prepare and Maintain CM Plan and Procedures and Documentation	This element includes the preparation of the Configuration Management Plan (CDRL #106). It also includes the administration and supervision of CM activities including coordination with subcontractors and the NDPO. This element covers the BOC phase.
641401	4.1.4	Prepare and Maintain Engineering Change Notices/ Request and Other CM Related Documents	This element includes the preparation and processing of all change documents (e.g. ECP/ECN/SCN/ECO/etc.) during the BOC phase.
641402	4.1.4	Prepare and Maintain Engineering Change Notices/ Request and Other CM Related Documents	Identical to 641401, except this element covers the IOC phase.
641403	4.1.4	Prepare and Maintain Engineering Change Notices/ Request and Other CM Related Documents	Identical to 641401, except this element covers the FOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641404	4.1.4	Perform CM Audits	This element includes the preparation and support to functional and physical configuration audits during the BOC phase.
641405	4.1.4	Perform CM Audits	Identical to 641404, except this element covers the IOC phase.
641406	4.1.4	Perform CM Audits	Identical to 641404, except this element covers the FOC phase.
641407	4.1.4	Provide Master Product and Document Control	This includes the CM library activity in maintaining baseline products, specifications, and the processing and distribution of SCN during the BOC phase.
641408	4.1.4	Provide Master Product and Document Control	Identical to 641407, except this element covers the IOC phase.
641409	4.1.4	Provide Master Product and Document Control	Identical to 641407, except this element covers the FOC phase.
641410	4.1.4	Prepare and Maintain Software Version Description Document	This includes the preparation and maintenance of the software version Description Document (CDRL #152) during the BOC phase.
641411	4.1.4	Prepare and Maintain Software Version Description Document	Identical to 641410, except this element covers the IOC phase.
641412	4.1.4	Prepare and Maintain Software Version Description Document	Identical to 641410, except this element covers the FOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641413	4.1.4	Administer the Contractor CCB	This element includes the administration of Project Configuration Control Board. This effort includes preparation of agendas, minutes, etc. for the BOC phase.
641414	4.1.4	Administer the Contractor CCB	Identical to 641413, except this element covers the IOC phase.
641415	4.1.4	Administer the Contractor CCB	Identical to 641413, except this element covers the FOC phase.
641416	4.1.4	Provide Change Status Accounting	This element covers the processing of the monthly system accounting for ECP and baseline management during the BOC phase.
641417	4.1.4	Provide Change Status Accounting	Identical to 641416, except this element covers the IOC phase.
641418	4.1.4	Provide Change Status Accounting	Identical to 641416, except this element covers the FOC phase.
641500	4.1.5	Prepare Project Security Plan and Security Procedures	Covers the preparation of the Security Plan (CDRL #105) during the BOC phase.
641501	4.1.5	Implement Security Procedures	This element covers the implementation and monitoring of special security requirements mandated by the Government. This includes: document control, clearance, physical security, personnel briefings, visitor control, computer security, etc. This element covers the BOC phase.
641502	4.1.5	Implement Security Procedures	Identical to 641501, except this element covers the IOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641503	4.1.5	Implement Security Procedures	Identical to 641501, except this element covers the FOC phase.
641600	4.1.6	Provide Monthly Status Reviews	Coordination and preparation of monthly Status Reviews (CDRL #112) during the BOC phase.
641601	4.1.6	Provide Monthly Status Reviews	Identical to 641600, except this element covers the IOC phase.
641602	4.1.6	Provide Monthly Status Reviews	Identical to 641600, except this element covers the FOC phase.
641700	4.1.7	Provide Management Control and Visibility to Cost Schedule <input type="text"/>	This covers the subcontract management coordination of <input type="text"/> during the BOC phase.
641701	4.1.7	Provide Management Control and Visibility to Cost <input type="text"/>	Identical to 641700, except this element covers the IOC phase.
641702	4.1.7	Provide Management Control and Visibility to Cost <input type="text"/>	Identical to 641700, except this element covers the FOC phase.
641703	4.1.7	Provide Management, Control and Visibility to Cost Schedule <input type="text"/>	This covers the subcontract management coordination of the <input type="text"/> during the BOC phase.
641704	4.1.7	Provide Management, Control and Visibility to Cost Schedule <input type="text"/>	Identical to 641703, except this element covers the IOC phase.

STAT
STAT
SIAI

STAT

STAT

STAT
STAT

STAT

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>	
641705	4.1.7	Provide Management, Control and Visibility to Cost Schedule <input type="text"/>	Identical to 641703, except this element covers the FOC phase.	STAT
641706	4.1.7	Provide Management, Control and Visibility to Cost Schedule of <input type="text"/> <input type="text"/>	This covers the subcontract management coordination of <input type="text"/> during the BOC phase.	STAT STAT STAT
641707	4.1.7	Provide Management, Control and Visibility to Cost <input type="text"/>	Identical to 641706, except this element covers the IOC phase.	STAT
∞ 641708	4.1.7	Provide Management, Control and Visibility to Cost <input type="text"/>	Identical to 641706, except this element covers the FOC phase.	STAT
641800	4.1.8	Provide Publication, Maintenance and Control of All Project Documentation	This covers the publication, maintenance and control of all project documents including the Accession List (CDRL #156) and PDR, CDR, and quarterly review during the BOC phase.	
641801	4.1.8	Provide Publication, Maintenance and Control of All Project Documentation	This covers the publication, maintenance and control of all project documents including the Accession List (CDRL #156) and CDR and quarterly reviews during the IOC phase.	
641802	4.1.8	Provide Publication, Maintenance and Control of All Project Documentation	This covers the publication, maintenance and control of all project documents including the Accession List (CDRL #156) and CDR and quarterly reviews during the FOC phase.	

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641803	4.1.8	Prepare and Administer Document Management Plan	This covers the preparation and administrative of the Document Management Plan during the BOC phase.
24200	4.2	System Engineering	This category includes system level engineers and programmer analysts engaged in: system engineering management, analysis, operations engineering and development, design, transition and integration planning and support, test support, CM support and technical reviews.
642100	4.2.1	Provide Technical Management of Project	This covers the technical management of the system engineering effort by a senior level manager during the BOC phase. Administrative support is included.
642101	4.2.1	Provide Technical Management of Project	Identical to 642100, except this element covers the IOC phase.
642102	4.2.1	Provide Technical Management of Project	Identical to 642100, except this element covers the FOC phase.
642103	4.2.1	Provide/Enforce Software-Opns-Hardware Interface Standards	This covers the preparation and administration of standards to control interface designs between SW, Opr and HW elements (CDRL #118). Preparation follows parent document developed by SI. This element covers the BOC phase.
642104	4.2.1	Provide/Enforce Software-Opns-Hardware Interface Standards	Identical to 642103, except this element covers the IOC phase.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
642105	4.2.1	Provide/Enforce Software- Opns-Hardware Interface Standards	Identical to 642103, except this element covers the FOC phase.
642106	4.2.1	Prepare Segment Development Plan	This covers the development and preparation of the Segment Development Plan (CDRL #104) during the BOC phase.
642200	4.2.2	Provide Requirements Analysis and Traceability	This covers the development and preparation of the Requirements Traceability and Verifi- cation Matrix (CDRL #119) during the BOC phase.
642201	4.2.2	Provide Requirements Analysis and Traceability	Identical to 642200, except this element covers the IOC phase.
642202	4.2.2	Provide Requirements Analysis and Traceability	Identical to 642200, except this element covers the FOC phase.
642203	4.2.2	Provide Performance Analysis	This covers the technical performance measurement activities and the relevant document (CDRL #155) during the BOC phase.
642204	4.2.2	Provide Performance Analysis	Identical to 642203, except this element covers the IOC phase.
642205	4.2.2	Provide Performance Analysis	Identical to 642203, except this element covers the FOC phase.
642206	4.2.2	Provide RMA Analysis	Covers reliability/maintainability/ availability analysis, preparation of inputs to PDR, CDR documents, review of subcon- tractor RMA analysis. This element covers the BOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
642207	4.2.2	Provide RMA Analysis	This element repeats the activities of 642206 and includes review of RMA predictions for possible changes. This element covers the IOC phase.
642208	4.2.2	Provide RMA Analysis	Identical to 642207, except this element covers the FOC phase.
642209	4.2.2	Prepare Segment Design Analysis Report	This covers the development and preparation of the Segment Design Analysis Report (CDRL #122) during the BOC phase.
642210	4.2.2	Prepare Segment Design Analysis Report	Identical to 642209, except this element covers the IOC phase.
642211	4.2.2	Prepare Segment Design Analysis Report	Identical to 642209, except this element covers the FOC phase.
642212	4.2.2	Accomplish Trade Studies	This covers the performance of trade studies during the BOC phase.
642213	4.2.2	Accomplish Trade Studies	Identical to 642212, except this element covers the IOC phase.
642214	4.2.2	Accomplish Trade Studies	Identical to 642212, except this element covers the FOC phase.
642215	4.2.2	Provide Engineering Specialties	Provides for engineers engaged in integrated logistics support and human factors design during the BOC phase.
642218	4.2.2	Provide Support to Intersegment Interface Definition and Requirements Determination	This covers the development of interface control specifications and participation in the Interface Control Working Group (ICWG) to assure compatibility between the D/C Segment, other segments and external interfaces during the BOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
642219	4.2.2	Provide Support to Intersegment Interface Definition and Requirements Determination	Identical to 642218, except this element covers the IOC phase.
642220	4.2.2	Provide Support to Intersegment Interface Definition and Requirements Determination	Identical to 642218, except this element covers the FOC phase.
642221	4.2.2	Prepare Engineering Technical Notes	Covers preparation of Engineering Technical Notes (CDRL #120) during the BOC phase.
642222	4.2.2	Prepar Engineering Technical Notes	Identical to 642221, except this element covers the IOC phase.
642223	4.2.2	Prepar Engineering Technical Notes	Identical to 642221, except this element covers the FOC phase.
642300	4.2.3	Develop Segment Operation, Concepts, Procedures, and Specifications, Including Human Factors Engineering	This element covers the development and preparation of the Segment Operations Specification (CDRL #133) during the BOC phase.
642301	4.2.3	Develop Segment Operations, Concepts, Procedures and Specification, Including Human Factor Engineering	This covers the effort required to revise the Segment Operation Concept (CDRL #116) and the Segment Operations Specification (CDRL #133) during the IOC phase.
642302	4.2.3	Develop Segment Operations, Concepts, Procedures, and Specifications, Including Human Factor Engineering	Identical to 642301, except this element covers the FOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
642303	4.2.3	Develop User Manuals	Covers the development of User Manuals (CDRL #135) that provide all necessary information and procedures for qualified users to access and interact with the system during the BOC phase.
642304	4.2.3	Develop User Manuals	Identical to 642303, except this element covers the IOC phase.
642305	4.2.3	Develop User Manuals	Identical to 642303, except this element covers the FOC phase.
642306	4.2.3	Develop Segment/Systems Operation Manuals	Covers the development of Operators Manuals (CDRL #136) which provide computer operations personnel with a detailed operational description of the system and operating instructions. This element covers the BOC phase.
642307	4.2.3	Develop Segment/System Operation Manuals	Identical to 642306, except this element covers the IOC phase.
642308	4.2.3	Develop Segment/System Operation Manuals	Identical to 642306, except this element covers the FOC phase.
642309	4.2.3	Conduct Productivity Enhancement Studies	This element provides for the performance of productivity enhancement studies that focus on making system operations more efficient. This element covers the BOC phase.
642310	4.2.3	Conduct Productivity Enhancement Studies	Identical to 642309, except this element covers the IOC phase.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
642311	4.2.3	Conduct Productivity Enhancement Studies	Identical to 642309, except this element covers the FOC phase.
642312	4.2.3	Prepare O&M Plan	Covers the preparation of the O&M Plan (CDRL #123) which details the types and numbers of positionings, responsibilities, organization, etc., for performance of O&M during the BOC phase.
642313	4.2.3	Prepare O&M Plan	Covers the effort required to revise the O&M Plan (CDRL #123) during the IOC phase.
642314	4.2.3	Prepare O&M Plan	Identical to 642313, except this element covers the FOC phase.
642315	4.2.3	Prepare Maintenance and Logistics Plan	Covers the preparation of the Maintenance and Logistics Plan (CDRL #124) which defines the activities to be performed to ensure the availability of the required maintenance and logistics resources. Also includes monitoring the technical performance of the subcontractor. This element covers the BOC phase.
642316	4.2.3	Prepare Maintenance and Logistics Plan	Includes the effort required to revise the Maintenance and Logistics Plan (CDRL #124) during the IOC phase.
642317	4.2.3	Prepare Maintenance and Logistics Plan	Identical to 642316, except this element covers the FOC phase.
642400	4.2.4	Prepare Segment Design Specification Including Requirements Allocation	Includes the preparation of the Segment Design Specification (CDRL #117) during the BOC phase.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
642401	4.2.4	Provide Data Base Specification	Covers the preparation of the Data Base Specification (CDRL #125) which details the relationship of the data base storage requirement of all CPCI's in the segment to the storage capability of the segment. This element covers the BOC phase.
642402	4.2.4	Provide Engineering Specialties Design	Covers the engineering specification design effort performed in the BOC phase.
642405	4.2.4	Provide SW-Opns-HW Interface Design	Effort to development the Operations/ Software, Operations/Hardware, Hardware/ Software and Software/Software Interface Specs CDRL's 126, 127, 128 and 129 respectively. Covers BOC phase.
642406	4.2.4	Provide SW-Opns-HW Interface Design	Identical to 642405, except this covers IOC phase.
642407	4.2.4	Provide SW-Opns-HW Interface Design	Identical to 642405, except this covers FOC phase.
642500	4.2.5	Develop Segment Transition and Integration Plan	Covers the preparation of the Segment Transition/Integration Plan (CDRL #115) during the BOC phase.
642501	4.2.5	Develop Segment Transition and Integration Plan	Identical to 642500, accept their element covers the IOC phase.
642502	4.2.5	Develop Segment Transition and Integration Plan	Identical to 642500, accept their element covers the FOC phase.
642503	4.2.5	Support Facility Planning Installation and Checkout	Includes the effort by system engineers to support the facility planning task and the installation and checkout task during the BOC phase.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
642504	4.2.5	Support Facility Planning Installation and Checkout	Identical to 642503, except this element covers the IOC phase.
642505	4.2.5	Support Facility Planning Installation and Checkout	Identical to 642503, except this element covers the FOC phase.
642506	4.2.5	Support Transition of New Capability Into the Operational Environment	Covers the effort by system engineers to support the transition of new capability into the operational environment during the BOC phase.
642507	4.2.5	Support Transition of New Capability Into the Operational Environment	Identical to 642506, except this element covers the IOC phase.
642508	4.2.5	Support Transition of New Capability Into the Operational Environment	Identical to 642506, except this element covers the FOC phase.
642600	4.2.6	Prepare Segment Verification Plan	Covers the preparation of the Segment Verification Plan (CDRL #121) during the BOC phase.
642601	4.2.6	Prepare Segment Verification Plan	Identical to 642600, except this element covers the IOC phase.
642602	4.2.6	Prepare Segment Verification Plan	Identical to 642600, except this element covers the FOC phase.
642603	4.2.6	Prepare Segment Test Plan	Covers the preparation of the Segment Test Plan (CDRL #130) during the BOC phase.
642604	4.2.6	Prepare Segment Test Plan	Identical to 642603, except this element covers the IOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
642605	4.2.6	Prepare Segment Test Plan	Identical to 642603, except this element covers the FOC phase.
642606	4.2.6	Support the Execution and Evaluation of Tests	Provide support to execution and evaluation of tests during the BOC phase.
642607	4.2.6	Support the Execution and Evaluation of Test	Identical to 642606, except this element covers the IOC phase.
642608	4.2.6	Support the Execution and Evaluation of Test	Identical to 642606, except this element covers the FOC phase.
642700	4.2.7	Evaluate Proposed Changes and Provide Change Request Impact Analysis Including Interface Control	Covers the effort required to evaluate proposed changes and provide change request impact analysis including interface control during the BOC phase.
642701	4.2.7	Evaluate Proposed Changes and Provide Change Request Impact Analysis Including Interface Control	Identical to 642700, except this element covers the IOC phase.
642702	4.2.7	Evaluate Proposed Changes and Provide Change Request Impact Analysis Including Interface Control	Identical to 642700, except this element covers the FOC phase.
642800	4.2.8	PDR Technical Review	Covers the effort required to prepare for and participate in the PDR technical review during the BOC phase.
642801	4.2.7	PDR Technical Review	Covers the effort to prepare for and participate in the PDR technical update review during the IOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
642803	4.2.8	CDR Technical Review	Covers the effort required to perform the CDR Technical Review during the BOC phase.
642804	4.2.8	CDR Technical Review	Identical to 642803, except this element covers the IOC phase.
642805	4.2.8	CDR Technical Review	Identical to 642803, except this element covers the FOC phase.
642806	4.2.8	SDR Technical Review	Cover the effort required to perform the SDR technical review during the BOC phase.
642809	4.2.8	Conduct Technical Audits/ Misc. Reviews	This element includes the effort required to conduct the technical audits and miscellaneous reviews as required. This element covers the BOC phase.
642810	4.2.8	Conduct Technical Audits/ Misc. Reviews	Identical to 642809, except this element covers the IOC phase.
642811	4.2.8	Conduct Technical Audits/ Misc. Reviews	Identical to 642809, except this element covers the FOC phase.
243000	4.3	Software Development (BOC)	This covers the software development effort during the BOC phase and includes the following functions: management, preliminary design, critical design, development, test and documentation.
643001	4.3.1	Manage All SW Development Activities	This covers the efforts of second and third level management functions required to manage the SW development tasks in the BOC phase.

	<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>	
	643002	4.3.1	NPIC Specific SW Training	This covers the purchase of the commercial training course needed to train programmer personnel associated with the UNIVAC System and the COBOL programming language during the BOC phase.	
	643003	4.3.1	SW Tool Development	Includes the development and/or assembly of specific tools required for D/C Segment SW development such as: Add COBOL to STI, provide <input type="checkbox"/> to UNIVAC download capability for test. This element covers the BOC phase.	STAT
19	643004	4.3.1	SW Architecture	Covers the effort required to ensure SW architectural integrity during the BOC phase.	
	643005	4.3.1	Technical Support to Subcontract Management	Covers the software development effort required to support Subcontract Management to ensure technical oversight during the phase.	
	643007	4.3.1	Segment PPS&C	Covers the effort required to produce the Segment Programming, Practices, Standards and Convention (CDRL #132) during the BOC phase. This is prepared to be compatible with the System Integrators PPS&C.	
	643008	4.3.1	COBOL Code Conversion	Covers the purchase of COBOL code conversion services during the BOC phase to convert unmodified code from the UNIVAC to <input type="checkbox"/> processor.	STAT

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643009	4.3.1	Library Control	Covers the performance of routine source library maintenance/control activities during the BOC phase.
643010	4.3.1	SW Builds and Releases	Perform software builds and maintain software version control/documentation. Maintain hard copy control. This element covers the BOC phase.
643011	4.3.1	Provide Inputs to Segment Development Plan	Prepare and maintain the software section of the Segment Development Plan during the BOC phase.
643012	4.3.1	DMS 1100 Level 6 to Level 8 Conversion	Covers the conversion of DMS 1100 from Level 6 to Level 8. This includes planning design, implementation, and test. This element covers the BOC phase.
643014	4.3.1	Data Base Conversion Design, Implementation, Verification	Covers the conversion of the data base needed for BOC from DMS 1100 base to M204 base. Included are planning, design, conversion utility creation, file conversion, and verification. This element covers the BOC phase.
643015	4.3.1	Data Base Package	This covers the preparation of the Data Base Package (CDRL #151) which defines the actual entries to be used for initializing each data base item. This element covers the BOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643016	4.3.1	Data Base Support to Development and Test and Verification	This effort includes the Data Base Administration function and production of the final version of the Data Base Administration Manual (CDRL #137) during the BOC phase.
643017	4.3.2.1	Requirements Analysis and Allocation	This covers the CPCI BEPPRE during the BOC phase and includes the design effort which provides for analysis of Segment Design specification functions and their allocations to individual CPCI's (and CI's). This effort occurs after completion of the Design Concept Review and leads to the generation of the CPCI Part I specs. for PDR.
643018	4.3.2.1	Prepare (Prelim.) Design Part I Specs. and Conduct Internal Design Reviews	This covers the CPCI BEPPRE during the BOC phase and includes the preparation of the CPCI preliminary Part I specification (CDRL #141) and participation in internal design reviews. This effort is performed by the System Engineering group and augmented by the SW Development group which supports requirements allocation and development of the Part I specs.
643019	4.3.2.1	Prepare Data Dictionary	This covers the CPCI BEPPRE during the BOC phase and includes the preparation of the Data Dictionary (CDRL #145). The Data Dictionary contains a description of every data item in D/C Segment file.
643020	4.3.2.1	Prepare (Prelim) Part II Specs.	This covers the CPCI BEPPRE during the BOC phase and includes the preparation of the preliminary CPCI Part II specification (CDRL #142).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643021	4.3.2.1	Prepare CPCI Test Plan (Prelim.)-Appendix for BEPPRE	This covers the CPCI BEPPRE during the BOC phase and includes the preparation of the preliminary CPCI Test Plan (CDRL #131).
643022	4.3.2.2	Prepare Build-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BEPPRE during the BOC phase and includes the preparation of the CPCI Part II Specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.
643023	4.3.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BEPPRE during the BOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
643024	4.3.2.2	Prepare CPCI Test Plan (Final)-Appendix for BEPPRE	This covers the CPCI BEPPRE during the BOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
643025	4.3.2.3	Code and Unit Test	This covers the CPCI BEPPRE during the BOC phase and includes the development of source code at the module level, its unit test and debug.
643026	4.3.2.3	Integrate and Test to CPC Level	This covers the CPCI BEPPRE during the BOC phase and includes the SW development activities to integrate and test modules up to CPC level.
643027	4.3.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BEPPRE during the BOC phase and includes the formal testing by the T&V group. This testing consists of PQT testing of CPC/Strings and FQT testing of complete CPCI's and their interfaces with other CPCI's.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
643028	4.3.2.4	Develop SW Test Procedures	This covers the CPCI BEPPRE during the BOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps, environment and data to be collected.
643029	4.3.2.4	Support Test and Verification	This covers the CPCI BEPPRE during the BOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error corrections.
643030	4.3.2.4	Prepare Test Reports	This covers the CPCI BEPPRE during the BOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
643031	4.3.2.5	Prepare Inputs to User, Operator and Data Base Administration Manuals	This covers the CPCI BEPPRE during the BOC phase and includes the preparation of inputs to Users Manual (CDRL #135), Operator Manual (CDRL #136), and Data Base Administrators Manual (CDRL #137).
643032	4.3.2.5	CPCI Listings As-built	This covers the CPCI BEPPRE during the BOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
643034	4.3.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BEPPRE during the BOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
643035	4.3.2.5	Prepare Inputs to Training Manuals	This covers the CPCI BEPPRE during the BOC phase and includes the preparation inputs to the various training manuals.
643036	4.3.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BEPPRE during the BOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
643037	4.3.2.1	Requirements Analysis and Allocation	This covers the CPCI BEMGMT during the BOC phase and includes the design effort which provides for analysis of Segment Design specification functions and their allocations to individual CPCI's (and CI's). This effort occurs after completion of the Design Concept Review and leads to the generation of the CPCI Part I specs. for PDR.
643038	4.3.2.1	Prepare (Prelim.) Design Part I Specs. and Conduct Internal Design Reviews	This covers the CPCI BEMGMT during the BOC phase and includes the preparation of the CPCI preliminary Part I specifications (CDRL #141) and participation in internal design reviews. This effort is performed by the System Engineering group and augmented by the SW Development group which supports requirements allocation and development of the Part I specs.
643039	4.3.2.1	Prepare Data Dictionary	This covers the CPCI BEMGMT during the BOC phase and includes the preparation of the Data Dictionary (CDRL #145). The Data Dictionary contains a description of every data item in D/C Segment file.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643040	4.3.2.1	Prepare (Prelim.) Part II Specs.	This covers the CPCI BEMGMT during the BOC phase and includes the preparation of the preliminary CPCI Part II specifications (CDRL #142).
643041	4.3.2.1	Prepare CPCI Test Plan (Prelim.) Appendix for BEMGMT	This covers the CPCI BEMGMT during the BOC phase and includes the preparation of the preliminary CPCI Test Plan (CDRL #131).
643042	4.3.2.2	Prepare Build-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BEMGMT during the BOC phase and includes the preparation of the CPCI Part II Specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.
643043	4.3.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BEMGMT during the BOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
643044	4.3.2.2	Prepare CPCI Test Plan (Final) - Appendix for BEMGMT	This covers the CPCI BEMGMT during the BOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
643045	4.3.2.3	Code and Unit Test	This covers the CPCI BEMGMT during the BOC phase and includes the development of source code at the module level, its unit test and debug.
643046	4.3.2.3	Integrate and Test to CPC Level	This covers the CPCI BEMGMT during the BOC phase and includes the SW development activities to integrate and test modules up to CPC level.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643047	4.3.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BEMGMT during the BOC phase and includes the formal testing by the T&V group. This testing consists of PQT testing of CPC/Strings and FQT testing of complete CPCIs and its interface with other CPCIs.
643048	4.3.2.4	Develop SW Test Procedures	This covers the CPCI BEMGMT during the BOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
643049	4.3.2.4	Support Test and Verification	This covers the CPCI BEMGMT during the BOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
643050	4.3.2.4	Prepare Test Reports	This covers the CPCI BEGMGT during the BOC phase and includes activities by the T&V group to prepare formal test reports on the results of PQT/FQT testing.
643051	4.3.2.5	Prepare Inputs to User, Operator, and Data Base Administration Manuals	This covers the CPCI BEGMGT during the BOC phase and includes the preparation of inputs to User Manual (CDRL #135), Operators Manual (CDRL #136), and Data Base Administrators Manual (CDRL #137).
643052	4.3.2.5	CPCI Listings As-Built	This covers the CPCI BEMGMT during the BOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643053	4.3.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BEMGMT during the BOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).
643054	4.3.2.5	Prepare Inputs to Training Manuals	This covers the CPCI BEMGMT during the BOC phase and includes the preparation inputs to the various training manuals.
643055	4.3.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BEMGMT during the BOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
643056	4.3.2.1	Requirements Analysis and Allocation	This covers the CPCI BERESU during the BOC phase and includes the design effort which provides for analysis of Segment Design specification functions and their allocations to individual CPCIs (and CIs). This effort occurs after completion of the Design Concept Review and leads to the generation of the CPCI Part I specs. for PDR.
643057	4.3.2.1	Prepare (Prelim.) Design Part I Specs. and Conduct Internal Design Reviews	This covers the CPCI BERESU during the BOC phase and includes the preparation of the CPCI preliminary Part I specification (CDRL #141) and participation in internal design reviews. This effort is performed by the System Engineering group and augmented by the SW Development group which supports requirements allocation and development of the Part I specs.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643058	4.3.2.1	Prepare Data Dictionary	This covers the CPCI BERESU during the BOC phase and includes the preparation of the Data Dictionary (CDRL #145). The Data Dictionary contains a description of every data item in D/C Segment file.
643059	4.3.2.1	Prepare (Prelim.) Part II Specs.	This covers the CPCI BERESU during the BOC phase and includes the preparation of the preliminary CPCI Part II specification (CDRL #142).
643060	4.3.2.1	Prepare CPCI Test Plan (Prelim.) Appendix for BERESU	This covers the CPCI BERESU during the BOC phase and includes the preparation of the preliminary CPCI Test Plan (CDRL #131).
643061	4.3.2.2	Prepare Build-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BERESU during the BOC phase and includes the preparation of the CPCI Part II specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.
643062	4.3.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BERESU during the BOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
643063	4.3.2.2	Prepare CPCI Test Plan (Final) Appendix for BERESU	This covers the CPCI BERESU during the BOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
643064	4.3.2.3	Code and Unit Test	This covers the CPCI BERESU during the BOC phase and includes the development of source code at the module level, its unit test and debug.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643065	4.3.2.3	Integrate and Test to CPC Level	This covers the CPCI BERESU during the BOC phase and includes the SW development activities to integrate and test modules up to CPC level.
643066	4.3.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BERESU during the BOC phase and includes the formal testing by the T&V group. This testing consists of PQT testing of CPC/strings and FQT testing of complete CPCIs and its interface with other CPCIs.
643067	4.3.2.4	Develop SW Test Procedures	This covers the CPCI BERESU during the BOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
643068	4.3.2.4	Support Test Verification	This covers the CPCI BERESU during the BOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
643069	4.3.2.4	Prepare Test Reports	This covers the CPCI BERESU during the BOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
643071	4.3.2.5	CPCI Listings As-built	This covers the CPCI BERESU during the BOC phase and includes the listing of source instruction. Statements and object code for all CPC forming the CPCI (CDRL #150).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643074	4.3.2.5	Prepare As-Built Part # Specs.	This covers the CPCI BERESU during the BOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
643094	4.3.2.1	Requirements Analysis and Allocation	This covers the CPCI BMANIP during the BOC phase and includes the design effort which provides for analysis of Segment Design specification functions and their allocations to individual CPCI's (and CI's). This effort occurs after completion of the Design Concept Review and leads to the generation of the CPCI Part I specs. for PDR.
643301	4.3.2.1	Prepare (Prelim.) Design Part I Specs. and Conduct Internal Design Reviews	This covers the CPCI BMANIP during the BOC phase and includes the preparation of the CPCI preliminary Part I specification (CDRL #141) and participation in internal design reviews. This effort is preformed by the System Engineering group and augmented by the SW Development group which supports requirements allocation and development of the Part I specs.
643095	4.3.2.1	Prepare Data Dictionary	This covers the CPCI BMANIP during the BOC phase and includes the preparation of the Data Dictionary (CDRL #145). The Data Dictionary contains a description of every data item in D/C Segment file.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
643096	4.3.2.1	Prepare (Prelim.) Part II Specs.	This covers the CPCI BMANIP during the BOC phase and includes the preparation of the preliminary CPCI Part II specification (CDRL #142).
643097	4.3.2.1	Prepare CPCI Test Plan (Prelim.) - Appendix for BMANIP	This covers the CPCI BMANIP during the BOC phase and includes the preparation of the preliminary CPCI Test Plan (CDR #131).
643098	4.3.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BMANIP during the BOC phase and includes the preparation of the CPCI Part II specification or the "Built-to" specification (CDRL #142) and participation in internal design reviews.
643099	4.3.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BMANIP during the BOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
643100	4.3.2.2	Prepare CPCI Test Plan (Final) - Appendix for BMANIP	This covers the CPCI BMANIP during the BOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
643101	4.3.2.3	Code and Unit Test	This covers the CPCI BMANIP during the BOC phase and includes the development of source code at the module level, its unit test and debug.
643102	4.3.2.3	Integrate and Test to CPC Level	This covers the CPCI BMANIP during the BOC phase and includes the SW development activities to integrate and test modules up to CPC level.

IBM WBS NO.	RFP WBS NO.	WBS TITLE	WBS DESCRIPTION
643103	4.3.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BMANIP during the BOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
643104	4.3.2.4	Develop SW Test Procedures	This covers the CPCI BMANIP during the BOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
643105	4.3.2.4	Support Test and Verification	This covers the CPCI BMANIP during the BOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
643106	4.3.2.4	Prepare Test Reports	This covers the CPCI BMANIP during the BOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
643107	4.3.2.5	Prepare Inputs to User, Operator and Data Base Administration Manuals	This covers the CPCI BMANIP during the BOC phase and includes the preparation of inputs to Users Manual (CDRL #135), Operator Manual (CDRL #136), and Data Base Administrators Manual (CDRL #137).
643108	4.3.2.5	CPCI Listings As-built	This covers the CPCI BMANIP during the BOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643109	4.3.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BMANIP during the BOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).
643110	4.3.2.5	Prepare Inputs to Training Manuals	This covers the CPCI BMANIP during the BOC phase and includes the preparation inputs to the various training manuals.
643111	4.3.2.5	Prepare As-Built Part II Specifications	This covers the CPCI BMANIP during the BOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
643112	4.3.2.1	Requirements Analysis and Allocation	This covers the CPCI BSTATR during the BOC phase and includes the design effort which provides for analysis of Segment Design specification functions and their allocations to individual CPCI's (and CI's). This effort occurs after completion of the Design Concept Review and leads to the generation of CPCI Part I specs. for PDR.
643113	4.3.2.1	Prepare (Prelim.) Design Part I Specs. and Conduct Internal Design Reviews	This covers the CPCI BSTATR during the phase and includes the preparation of the CPCI preliminary Part I specification (CDRL #141) and participation in internal design reviews. This effort is performed by the System Engineering group and augmented by the SW development group which supports requirements allocation and development of the Part I specs.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643114	4.3.2.1	Prepare Data Dictionary	This covers the CPCI BSTATR during the BOC phase and includes the preparation of the Data Dictionary (CDRL #145). The Data Dictionary contains a description of every data item in D/C Segment file.
643115	4.3.2.1	Prepare (Prelim.) Part II Specs.	This covers the CPCI BSTATR during the BOC phase and includes the preparation of the preliminary CPCI Part II specification (CDRL #142).
643116	4.3.2.1	Prepare CPCI Test Plan (Prelim.) - Appendix for BSTATR	This covers the CPCI BSTATR during the BOC phase and includes the preparation of the preliminary CPCI Test Plan (CDR #131).
643117	4.3.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BSTATR during the BOC phase and includes the preparation of the CPCI Part II specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.
643118	4.3.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BSTATR during the BOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
643119	4.3.2.2	Prepare CPCI Test Plan (Final) - Appendix for BSTATR	This covers the CPCI BSTATR during the BOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
643120	4.3.2.3	Code and Unit Test	This covers the CPCI BSTATR during the BOC phase and includes the development of source code at the module level, its unit test and debug.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643121	4.3.2.3	Integrate and Test to CPC Level	This covers the CPCI BSTATR during the BOC phase and includes the SW development activities to integrate and test modules up to CPC level.
643122	4.3.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BSTATR during the BOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
643123	4.3.2.4	Develop SW Test Procedures	This covers the CPCI BSTATR during the BOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps, environment and data to be collected.
643124	4.3.2.4	Support Test and Verification	This covers the CPCI BSTATR during the BOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
643125	4.3.2.4	Prepare Test Reports	This covers the CPCI BSTATR during the BOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
643127	4.3.2.5	CPCI Listings As-built	This covers the CPCI BSTATR during the BOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643130	4.3.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BSTATR during the BOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
643149	4.3.2.1	Requirements Analysis and Allocation	This covers the CPCI BMMGMT during the BOC phase and includes the design effort which provides for analysis of Segment Design specification functions and their allocations to individual CPCI's (and CI's). This effort occurs after completion of the Design Concept Review and leads to the generation of the CPCI Part I specs. for PDR.
643150	4.3.2.1	Prepare (Prelim.) Design Part I Specs. and Conduct Internal Design Reviews	This covers the CPCI BMMGMT during the BOC phase and includes the preparation of the CPCI preliminary Part I specification (CDRL #141) and participation in internal design reviews. This effort is preformed by the System Engineering group and augmented by the SW Development group which supports requirements allocation and development of the Part I specs.
643151	4.3.2.1	Prepare Data Dictionary	This covers the CPCI BMMGMT during the BOC phase and includes the preparation of the Data Dictionary (CDRL #145). The Data Dictionary contains a description of every data item in D/C Segment file.

IBM WBS NO.	RFP WBS NO.	WBS TITLE	WBS DESCRIPTION
643153	4.3.2.1	Prepare CPCI Test Plan (Prelim.)- Appendix for BMMGMT	This covers the CPCI BMMGMT during the BOC phase and includes the preparation of the preliminary CPCI Test Plan (CDR #131).
643156	4.3.2.2	Prepare CPCI Test Plan (Final) - Appendix for BMMGMT	This covers the CPCI BMMGMT during the BOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
643158	4.3.2.3	Integrate and Test to CPC Level	This covers the CPCI BMMGMT during the BOC phase and includes the SW development activities to integrate and test modules up to CPC level.
37 643159	4.3.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BMMGMT during the BOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
643160	4.3.2.4	Develop SW Test Procedures	This covers the CPCI BMMGMT during the BOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps, environment and data to be collected.
643161	4.3.2.4	Support Test and Verification	This covers the CPCI BMMGMT during the BOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643162	4.3.2.4	Prepare Test Reports	This covers the CPCI BMMGMT during the BOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
643163	4.3.2.5	CPCI Listings As-built	This covers the CPCI BMMGMT during the BOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
643167	4.3.2.1	Requirements Analysis and Allocation	This covers the CPCI BCCNTR during the BOC phase and includes the design effort which provides for analysis of Segment Design specification functions and their allocations to individual CPCI's (and CI's). This effort occurs after completion of the Design Concept Review and leads to the generation of the CPCI Part I specs. for PDR.
643168	4.3.2.1	Prepare (Prelim.) Design Part I Specs. and Conduct Internal Design Reviews	This covers the CPCI BCCNTR during the BOC phase and includes the preparation of the CPCI preliminary Part I specification (CDRL #141) and participation in internal design reviews. This effort is performed by the System Engineering group and augmented by the SW Development group which supports requirements allocation and development of the Part I Specs.
643169	4.3.2.1	Prepare Data Dictionary	This covers the CPCI BCCNTR during the BOC phase and includes the preparation of the Data Dictionary (CDRL #145). The Data Dictionary contains a description of every data item in D/C Segment file.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643170	4.3.2.1	Prepare (Prelim.) Part II Specs.	This covers the CPCI BCCNTR during the BOC phase and includes the preparation of the preliminary CPCI Part II specification (CDRL #142).
643171	4.3.2.1	Prepare CPCI Test Plan (Prelim.) - Appendix for BCCNTR	This covers the CPCI BCCNTR during the BOC phase and includes the preparation of the preliminary CPCI Test Plan (CDR #131).
643172	4.3.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BCCNTR during the BOC phase and includes the preparation of the CPCI Part II specification or the "built-to" specification (CDRL #142) and participation in internal design reviews.
643173	4.3.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BCCNTR during the BOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
643174	4.3.2.2	Prepare CPCI Test Plan (Final) - Appendix for BCCNTR	This covers the CPCI BCCNTR during the BOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
643175	4.3.2.3	Code and Unit Test	This covers the CPCI BCCNTR during the BOC phase and includes the development of source code at the module level, its unit test and debug.
643176	4.3.2.3	Integrate and Test to CPC Level	This covers the CPCI BCCNTR during the BOC phase and includes the SW development activities to integrate and test modules up to CPC level.

40

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643177	4.3.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BCCNTR during the BOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
643178	4.3.2.4	Develop SW Test Procedure	This covers the CPCI BCCNTR during the BOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps, environment and data to be collected.
643179	4.3.2.4	Support Test and Verification	This covers the CPCI BCCNTR during the BOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
643180	4.3.2.4	Prepare Test Reports	This covers the CPCI BCCNTR during the BOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
643182	4.3.2.5	CPCI Listings As-built	This covers the CPCI BCCNTR during the BOC phase and includes the listing of source instruction, statements and object code for all CPC forming the CPCI (CDRL #150).

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
643186	4.3.2.1	Requirements Analysis and Allocation	This covers the CPCI BQUERY during the phase and includes the design effort which provides for analysis of Segment Design specification functions and their allocations to individual CPCI's (and CI's). This effort occurs after completion of the Design Concept Review and leads to the generation of the CPCI Part I specs. for PDR.
643187	4.3.2.1	Prepare (Prelim.) Design Part I Specs. and Conduct Internal Design Reviews	This covers the CPCI BQUERY during the BOC phase and includes the preparation of the preliminary Part I specification (CDRL #141) and participation in internal design reviews. This effort is performed by the System Engineering group and augmented by the SW Development group which supports requirements allocation and development of the Part I specs.
643188	4.3.2.1	Prepare Data Dictionary	This covers the CPCI BQUERY during the BOC phase and includes the preparation of the Data Dictionary (CDRL #145). The Data Dictionary contains a description of every data item in D/C Segment file.
643189	4.3.2.1	Prepare (Prelim.) Part II Specs.	This covers the CPCI BQUERY during the BOC phase and includes the preparation of the preliminary CPCI Part II specification (CDRL #142).
643190	4.3.2.1	Prepare CPCI Test Plan (Prelim.) - Appendix for BQUERY	This covers the CPCI BQUERY during the BOC phase and includes the preparation of the preliminary CPCI Test Plan (CDR #131).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643191	4.3.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BQUERY during the BOC phase and includes the preparation of the CPCI Part II specification or the "built-to" specification (CDRL #142) and participation in internal design reviews.
643192	4.3.2.2	Prepare CPCI Test Plan (Final) - Appendix for BQUERY	This covers the CPCI BQUERY during the BOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
643193	4.3.2.3	Code and Unit Test	This covers the CPCI BQUERY during the BOC phase and includes the development of source code at the module level, its unit test and debug.
643194	4.3.2.3	Integrate and Test to CPC Level	This covers the CPCI BQUERY during the BOC phase and includes the SW development activities to integrate and test modules up to CPC level.
643195	4.3.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BQUERY during the BOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
643196	4.3.2.4	Develop SW Test Procedure	This covers the CPCI BQUERY during the BOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
643197	4.3.2.4	Support Test and Verification	This covers the CPCI BQUERY during the BOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
643198	4.3.2.4	Prepare Test Reports	This covers the CPCI BQUERY during the BOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
643200	4.3.2.5	CPCI Listings As-built	This covers the CPCI BQUERY during the BOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
643203	4.3.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BQUERY during the BOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
643204	4.3.2.1	Requirements Analysis and Allocation	This covers the CPCI BAPPLS during the BOC phase and includes the design effort which provides for analysis of Segment Design specification functions and their allocations to individual CPCI's (and CI's). This effort occurs after completion of the Design Concept Review and leads to the generation of the CPCI Part I specs. for PDR.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
643205	4.3.2.1	Prepare (Prelim.) Design Part I Specs. and Conduct Internal Design Reviews	This covers the CPCI BAPPLS during the BOC phase and includes the preparation of the CPCI preliminary Part I specification (CDRL #141) and participation in internal design reviews. This effort is performed by the System Engineering group and augmented by the SW Development group which supports requirements allocation and development of the Part I specs.
643206	4.3.2.1	Prepare Data Dictionary	This covers the CPCI BAPPLS during the BOC phase and includes the preparation of the Data Dictionary (CDRL #145). The Data Dictionary contains a description of every data item in D/C Segment file.
643207	4.3.2.1	Prepare (Prelim.) Part II Specs.	This covers the CPCI BAPPLS during the BOC phase and includes the preparation of the preliminary CPCI Part II specification (CDRL # 142).
643208	4.3.2.1	Prepare CPCI Test Plan (Prelim.) - Appendix for BAPPLS	This covers the CPCI BAPPLS during the BOC phase and includes the preparation of the preliminary CPCI Test Plan (CDR #131).
643209	4.3.2.2	Prepare Built-to Part II Specs and Conduct Internal Design Review	This covers the CPCI BAPPLS during the BOC phase and includes the preparation of the CPCI Part II specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.
643210	4.3.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BAPPLS during the BOC and includes the preparation of the preliminary Programmers Manual (CDRL #138).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643211	4.3.2.2	Prepare CPCI Test Plan (Final) - Appendix for BAPPLS	This covers the CPCI BAPPLS during the BOC phase and includes the preparation of the of the final CPCI Test Plan (CDRL #131).
643212	4.3.2.3	Code and Unit Test	This covers the CPCI BAPPLS during the BOC phase and includes the development of source code at the module level, its unit test and debug.
643213	4.3.2.3	Integrate and Test to CPC Level	This covers the CPCI BAPPLS during the BOC phase and includes the SW development activities to integrate and test modules up to CPC level.
45 643214	4.3.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BAPPLS during the BOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
643215	4.3.2.4	Develop SW Test Procedures	This covers the CPCI BAPPLS during the BOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
643216	4.3.2.4	Support Test and Verification	This covers the CPCI BAPPLS during the BOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
643217	4.3.2.4	Prepare Test Reports	This covers the CPCI BAPPLS during the BOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
643219	4.3.2.5	CPCI Listings as-built	This covers the CPCI BAPPLS during the BOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
643220	4.3.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BAPPLS during the BOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).
643221	4.3.2.5	Prepare Inputs to Training Manuals	This covers the CPCI BAPPLS during the BOC phase and includes the preparation inputs to the various training manuals.
643222	4.3.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BAPPLS during the BOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
643223	4.3.2.1	Requirements Analysis and Allocation	This covers the CPCI BDMAPS during the BOC phase and includes the design effort which provides for analysis of Segment Design specification functions and their allocations to individual CPCI's (and CI's). This effort occurs after completion of the Design Concept Review and leads to the generation of the CPCI Part I specs. for PDR.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643224	4.3.2.1	Prepare (Prelim.) Design Part I Specs. and Conduct Internal Design Reviews	This covers the CPCI BDMAPS during the BOC phase and includes the preparation of the CPCI (CDRL #141) and participation in internal design reviews. This effort is performed by the System Engineering group and augmented by the SW Development group, which supports requirement's allocation and development of the Part I specs.
643225	4.3.2.1	Prepare Data Dictionary	This covers the CPCI BDMAPS during the BOC phase and includes the preparation of the Data Dictionary (CDRL #145). The Data Dictionary contains a description of every data item in D/C Segment file.
643226	4.3.2.1	Prepare (Prelim.) Part II Specs.	This covers the CPCI BDMAPS during the BOC phase and includes the preparation of the preliminary CPCI Part II specification (CDRL #142).
643227	4.3.2.1	Prepare CPCI Test Plan (Prelim.) - Appendix for BDMAPS	This covers the CPCI BDMAPS during the BOC phase and includes the preparation of the preliminary CPCI Test Plan (CDR #131).
643228	4.3.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BDMAPS during the BOC phase and includes the preparation of the CPCI Part II specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.
643229	4.3.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BDMAPS during the BOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).

48

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643230	4.3.2.2	Prepare CPCI Test Plan (Final) - Appendix for BDMAPS	This covers the CPCI BDMAPS during the BOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
643231	4.3.2.3	Code and Unit Test	This covers the CPCI BDMAPS during the BOC phase and includes the development of source code at the module level, its unit test and debug.
643232	4.3.2.3	Integrate and Test to CPC Level	This covers the CPCI BDMAPS during the BOC phase and includes the SW development activities to integrate and test modules up to CPC level.
643233	4.3.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BDMAPS during the BOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
643234	4.3.2.4	Develop SW Test Procedures	This covers the CPCI BDMAPS during the BOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps, environment and data to be collected.
643235	4.3.2.4	Support Test and Verification	This covers the CPCI BDMAPS during the BOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
643236	4.3.2.4	Prepare Test Reports	This covers the CPCI BDMAPS during the BOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
643238	4.3.2.5	CPCI Listings As-built	This covers the CPCI BDMAPS during the BOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
643241	4.3.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BDMAPS during the BOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
643242	4.3.2.1	Requirements Analysis and Allocation	This covers the CPCI BTDEV during the BOC phase and includes the design effort which provides for analysis of Segment Design specification functions and their allocations to individual CPCI's (and CI's). This effort occurs after completion of the Design Concept Review and leads to the generation of the CPCI Part I specs. for PDR.
643243	4.3.2.1	Prepare (Prelim.) Design Part I Specs. and Conduct Internal Design Reviews	This covers the CPCI BTDEV during the BOC phase and includes the preparation of the CPCI preliminary Part I specification (CDRL #141) and participation in internal design reviews. This effort is performed by the System Engineering group and augmented by the SW Development group which supports requirements allocation and development of the Part I specs.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643244	4.3.2.1	Prepare Data Dictionary	This covers the CPCI BTTDEV during the BOC phase and includes the preparation of the Data Dictionary (CDRL #145). The Data Dictionary contains a description of every data item in D/C Segment file.
643245	4.3.2.1	Prepare (Prelim.) Part II Specs.	This covers the CPCI BTTDEV during the BOC phase and includes the preparation of the preliminary CPCI Part II specification (CDRL#142).
643246	4.3.2.1	Prepare CPCI Test Plan (Prelim.) - Appendix for BTTDEV	This covers the CPCI BTTDEV during the BOC phase and includes the preparation of the preliminary CPCI Test Plan (CDR #131).
643247	4.3.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BTTDEV during the BOC phase and includes the preparation of the CPCI Part II specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.
643248	4.3.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BTTDEV during the BOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
643249	4.3.2.2	Prepare CPCI Test Plan (Final) - Appendix for BTTDEV	This covers the CPCI BTTDEV during BOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
643250	4.3.2.3	Code and Unit Test	This covers the CPCI BTTDEV during the BOC phase and includes the development of source code at the module level, its unit test and debug.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643251	4.3.2.3	Integrate and Test to CPC Level	This covers the CPCI BTTDEV during the BOC phase and includes the SW development activi- ties to integrate and test modules up to CPC level.
643252	4.3.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BTTDEV during the BOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
643253	4.3.2.4	Develop SW Test Procedures	This covers the CPCI BTTDEV during the BOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environ- ment data to be collected.
643254	4.3.2.4	Support Test and Verification	This covers the CPCI BTTDEV during the BOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
643255	4.3.2.4	Prepare Test Reports	This covers the CPCI BTTDEV during the BOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
643256	4.3.2.5	Prepare Inputs to User, Operator and Data Base Administration Manuals	This covers the CPCI BTTDEV during the BOC phase and includes the preparation of in- puts to Users Manual (CDRL #135), Operators Manual (CDRL #136), and Data Base Admini- strators Manual (CDRL #137).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643257	4.3.2.5	CPCI Listings As-built	This covers the CPCI BTTDEV during the BOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
643258	4.3.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BTTDEV during the BOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).
643259	4.3.2.5	Prepare Inputs to Training Manuals	This covers the CPCI BTTDEV during the BOC phase and includes the preparation inputs to the various training manuals.
643260	4.3.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BTTDEV during the BOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
643261	4.3.2.1	Requirements Analysis and Allocation	This covers the CPCI WAPPLS during the BOC phase and includes the design effort which provides for analysis of Segment Design specification functions and their allocations to individual CPCI's (and CI's). This effort occurs after completion of the Design Concept Review and leads to the generation of the CPCI Part I specs. for PDR.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643262	4.3.2.1	Prepare (Prelim.) Design Part I Specs. and Conduct Internal Design Reviews	This covers the CPCI WAPPLS during the BOC phase and includes the preparation of the CPCI preliminary Part I specification (CDRL #141) and participation in internal design reviews. This effort is performed by the System Engineering group and augmented by the SW Development group which supports requirements allocation and development of the Part I specs.
643263	4.3.2.1	Prepare Data Dictionary	This covers the CPCI WAPPLS during the BOC phase and includes the preparation of the Data Dictionary (CDRL # 145). The Data Dictionary contains a description of every data item in D/C Segment file.
643264	4.3.2.1	Prepare (Prelim.) Part II Specs.	This covers the CPCI WAPPLS during the BOC phase and includes the preparation of the preliminary CPCI Part II specification (CDRL #142).
643265	4.3.2.1	Prepare CPCI Test Plan (Prelim.) - Appendix for WAPPLS	This covers the CPCI WAPPLS during the BOC phase and includes the preparation of the preliminary CPCI Test Plan (CDR #131).
643266	4.3.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI WAPPLS during the BOC phase and includes the preparation of the CPCI Part II specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.
643267	4.3.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI WAPPLS during the BOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
643268	4.3.2.2	Prepare CPCI Test Plan (Final) - Appendix for WAPPLS	This covers the CPCI WAPPLS during the BOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
643269	4.3.2.3	Code and Unit Test	This covers the CPCI WAPPLS during the BOC phase and includes the development of source code at the module level, its unit test and debug.
643270	4.3.2.3	Integrate and Test to CPC Level	This covers the CPCI WAPPLS during the BOC phase and includes the SW development activities to integrate and test modules up to CPC level.
643271	4.3.2.4	Test at the CPC and CPCI Levels	This covers the CPCI WAPPLS during the BOC phase and includes the formal testing by the T&V group. This testing consists of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
643272	4.3.2.4	Develop SW Test Procedures	This covers the CPCI WAPPLS during the BOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps, environment and data to be collected.
643273	4.3.2.4	Support Test and Verification	This covers the CPCI WAPPLS during the BOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643274	4.3.2.4	Prepare Test Reports	This covers the CPCI WAPPLS during the BOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
643275	4.3.2.5	Prepare Inputs to User, Operator and Data Base Administration Manuals	This covers the CPCI WAPPLS during the BOC phase and includes the preparation of inputs to Users Manual (CDRL #135), Operator Manual (CDRL #136), and Data Base Administrators Manual (CDRL #137).
643276	4.3.2.5	CPCI Listings As-built	This covers the CPCI WAPPLS during the BOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
643277	4.3.2.5	Prepare Programmers Manual (Final)	This covers the CPCI WAPPLS during the BOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).
643278	4.3.2.5	Prepare Inputs to Training Manuals	This covers the CPCI WAPPLS during the BOC phase and includes the preparation on inputs to the various training manuals.
643279	4.3.2.5	Prepare As-Built Part II Specs.	This covers the CPCI WAPPLS during th BOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643280	4.3.2.1	Requirements Analysis and Allocation	This covers the CPCI BEXSUP during the BOC phase and includes the design effort which provides for analysis of Segment Design specification functions and their allocations to individual CPCI's (and CI's). This effort occurs after completion of the Design Concept Review and leader to the generation of the CPCI Part I spec. for PDR.
643281	4.3.2.1	Prepare (Prelim.) Design Part I Specs. and Conduct Internal Design Reviews	This covers the CPCI BEXSUP during the BOC phase and includes the preparation of the CPCI preliminary Part I specification (CDRL #141) and participation in internal design reviews. This effort is performed by the System Engineering group and augmented by the SW Development group which supports requirements allocation and development of the Part I Specs.
643282	4.3.2.1	Prepare Data Dictionary	This covers the CPCI BEXSUP during the BOC phase and includes the preparation of the Data Dictionary (CDRL #145). The Data Dictionary contains a description of every data item in D/C Segment file.
643284	4.3.2.1	Prepare (Prelim.) Part II Specs.	This covers the CPCI BEXSUP during the BOC phase and includes the preparation of the preliminary CPCI Part II specification (CDRL #142).
643285	4.3.2.1	Prepare CPCI Test Plan (Prelim)-Appendix for BEXSUP	This covers the CPCI BEXSUP during the BOC phase and includes the preparation of the preliminary CPCI Test Plan (CDR #131).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
643286	4.3.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BEXSUP during the BOC phase and includes the preparation of the CPCI Part II specification or the "built-to" specification (CDRL #142) and participation in internal design reviews.
643287	4.3.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BEXSUP during the BOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
643288	4.3.2.2	Prepare CPCI Test Plan (Final) - Appendix for BEXSUP	This covers the CPCI BEXSUP during the BOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
643289	4.3.2.3	Code and Unit Test	This covers the CPCI BEXSUP during the BOC phase and includes the development of source code at the module level, its unit test and debug.
643290	4.3.2.3	Integrate and Test to CPC level	This covers the CPCI BEXSUP during the BOC phase and includes the SW development activities to integrate and test modules up to CPC level.
643291	4.3.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BEXSUP during the BOC phase and includes the formal testing by the T&V group. This testing consists of PQT testing CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
643292	4.3.2.4	Develop SW Test Procedures	This covers the CPCI BEXSUP during the BOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps, environment, and data to be collected.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
643293	4.3.2.4	Support Test and Verification	This covers the CPCI BEXSUP during the BOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
643294	4.3.2.4	Prepare Test Reports	This covers the CPCI BEXSUP during the BOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
643295	4.3.2.5	Prepare Inputs to User, Operator and Data Base Administration Manuals	This covers the CPCI BEXSUP during the BOC phase and includes the preparation of inputs to Users Manual (CDRL #135), Operators Manual (CDRL #136), and Data Base Administrators Manual (CDRL #137).
643296	4.3.2.5	CPCI Listings As-built	This covers the CPCI BEXSUP during the BOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
643298	4.3.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BEXSUP during the BOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).
643299	4.3.2.5	Prepare Inputs to Training Manuals	This covers the CPCI BEXSUP during the BOC phase and includes the preparation inputs to the various training manuals.

IBM WBS NO.	RFP WBS NO.	WBS TITLE	WBS DESCRIPTION
643300	4.3.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BEXSUP during the IOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
244000	4.4	Software Development (IOC)	This covers the software development effort during the IOC phase and includes the following functions: management, preliminary design, critical design, development, test, and documentation.
59 644001	4.4.1	Manage all SW Development Activities	This covers the efforts of second and third level management functions required to manage the SW development tasks in the IOC phase.
644005	4.4.1	SW Architecture	Covers the effort required to ensure SW architectural integrity during the IOC phase.
6440006	4.4.1	Technical Support to Subcontract Management	Covers the Software development effort required to support Subcontract Management to ensure technical oversight during the IOC phase.
644007	4.4.1	COBOL Code Conversion	Covers the Purchase of COBOL code conversion services during the IOC phase, to convert unmodified code from the UNIVAC <input type="text"/> processor.
644008	4.4.1	Library Control	Covers the performance of routine source library maintenance/control activities during the IOC phase.

STAT

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644009	4.4.1	SW Builds and Releases	Perform software builder and maintain software version control/documentation. Maintain hard copy control. This element cover the IOC phase.
644010	4.4.1	Provide Inputs to Segment Development Plan	Prepare and maintains the software section of the Segment Development Plan during the IOC phase.
644012	4.4.1	Data Base Conversion Design, Implementation, Verification	Covers the conversion of the data base need for BOC from DMS 1100 base to M204 base. Included are planning, design, conversion utility creation, file conversion, and verification. This element covers the IOC phase.
644013	4.4.1	Data Base Package	This covers the preparation of the Data Base Package (CDRL #151) which defines the actual entries to be used for initializing each data base item. This element covers the IOC phase.
644014	4.4.1	Data Base Support to Development and Test and Verification	This effort includes the Data Base Administration function and production of the final version of the Data Base Administration Manual (CDRL #137) during the IOC phase.
644015	4.4.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BEPPRE during the IOC phase and includes the preparation of the CPCI Part II specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.

	<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS</u>
				<u>DESCRIPTION</u>
	644016	4.4.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BEPPRE during the IOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
	644017	4.4.2.2	Prepare CPCI Test Plan (Final) - Appendix for BEPPRE	This covers the CPCI BEPPRE during the IOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
	644018	4.4.2.3	Code and Unit Test	This covers the CPCI BEPPRE during the IOC phase and includes the development of source code at the module level, its unit test and debug.
19	644019	4.4.2.3	Integrate and Test to CPC level	This covers the CPCI BEPPRE during the IOC phase and includes the SW development activities to integrate and test modules up to CPC level.
	644020	4.4.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BEPPRE during the IOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI.
	644021	4.4.2.4	Develop SW Test Procedures	This covers the CPCI BEPPRE during the IOC phase and include procedures describing test cases and acceptance criteria. Also includes detailed testing setups and environment data to be collected.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644022	4.4.2.4	Support Test and Verification	This covers the CPCI BEPPRE during the IOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
644023	4.4.2.4	Prepare Test Reports	This covers the CPCI BEPPRE during the IOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
644025	4.4.2.5	CPCI Listings As-built	This covers the CPCI BEPPRE during the IOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
644026	4.4.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BEPPRE during the IOC phase includes the preparation of final version of the Programmers Manual (CDRL #138).
644028	4.4.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BEPPRE during the IOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
644029	4.4.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BEMGMT during the IOC phase and includes the preparation of the CPCI Part II specification or the "built-to" specification (CDRL #142) and participation in internal design reviews.

63

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644030	4.4.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BEMGMT during the IOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
644031	4.4.2.2	Prepare CPCI Test Plan (Final) - Appendix for BEMGMT	This covers the CPCI BEMGMT during the IOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
644032	4.4.2.3	Code and Unit Test	This covers the CPCI BEMGMT during the IOC phase and includes the development of source code at the module level, its unit test and debug.
644033	4.4.2.3	Integrate and Test to CPC Level	This covers the CPCI BEMGMT during the IOC phase and includes the SW development activities to integrate and test modules up to CPC level.
644034	4.4.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BEMGMT during the IOC phase and includes the formal testing by the T&V group. This testing consists of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
644035	4.4.2.4	Develop SW Test Procedures	This covers the CPCI BEMGMT during the IOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644036	4.4.2.4	Support Test and Verification	This covers the CPCI BEMGMT during the IOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
644037	4.4.2.4	Prepare Test Reports	This covers the CPCI BEMGMT during the IOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
644039	4.4.2.5	CPCI Listings As-built	This covers the CPCI BEMGMT during the IOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
644040	4.4.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BEMGMT during the IOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).
644041	4.4.2.5	Prepare Inputs to Training Manuals	This covers the CPCI BEMGMT during the IOC phase and includes the preparation inputs to the various training manuals.
644042	4.4.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BEMGMT during the IOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644043	4.4.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BERESU during the IOC phase and includes the preparation of the CPCI Part II specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.
644044	4.4.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BERESU during the IOC phase and includes the preparation of the preliminary programmers Manual (CDRL #138).
644045	4.4.2.2	Prepare CPCI Test Plan (Final) - Appendix for BERESU	This covers the CPCI BERESU during the IOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
644046	4.4.2.3	Code and Unit Test	This covers the CPCI BERESU during the IOC phase and includes the development of source code at the module level, its unit test and debug.
644047	4.4.2.3	Integrate and Test to CPC Level	This covers the CPCI BERESU during the IOC phase and includes the SW development activities to integrate and test modules up to CPC level.
644048	4.4.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BERESU during the IOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644049	4.4.2.4	Develop SW Test Procedures	This covers the CPCI BERESU during the IOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
644050	4.4.2.4	Support Test and Verification	This covers the CPCI BERESU during the IOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
644051	4.4.2.4	Prepare Test Reports	This covers the CPCI BERESU during the IOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
644057	4.4.2.2	Prepare Build-to Part II specs. and Conduct Internal Design Review	This covers the CPCI BMANIP during the IOC phase and includes the preparation of the CPCI Part II specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.
644058	4.4.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BMANIP during the IOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
644059	4.4.2.2	Prepare CPCI Test Plan (Final) - Appendix for BMANIP	This covers the CPCI BMANIP during the IOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644060	4.4.2.3	Code and Unit Test	This covers the CPCI BMANIP during the IOC phase and includes the development of source code at the module level, its unit test and debug.
644061	4.4.2.3	Integrate and Test to CPC level	This covers the CPCI BMANIP during the IOC phase and includes the SW development activities to integrate and test module up to CPC level.
644062	4.4.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BMANIP during the IOC phase and includes the formal testing by the T&V group. The testing consists of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
644063	4.4.2.4	Develop SW Test Procedures	This covers the CPCI BMANIP during the IOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
644064	4.4.2.4	Support Test and Verification	This covers the CPCI BMANIP during the IOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error and correction.
644065	4.4.2.4	Prepare Test Reports	This covers the CPCI BMANIP during the IOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644067	4.4.2.5	CPCI Listings As-built	This covers the CPCI BMANIP during the IOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
644068	4.4.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BMANIP during the IOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138)
644070	4.4.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BMANIP during the IOC phase and includes the presentation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
644071	4.4.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BSTATR during the IOC phase and includes the preparation of the CPCI Part II specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.
644072	4.4.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BSTATR during the IOC phases and includes the preparation of the preliminary Programmers Manual (CDRL #138).
644073	4.4.2.2	Prepare CPCI Test Plan (Final) - Appendix for BSTATR	This covers the CPCI BSTATR during the IOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
644074	4.4.2.3	Code and Unit Test	This covers the CPCI BSTATR during the IOC phase and includes the development of source code at the module level, its unit test and debug.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644075	4.4.2.3	Integrate and Test to CPC Level	This covers the CPCI BSTATR during the IOC phase and includes the SW development activities to integrate and test module up to CPC level.
644076	4.4.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BSTATR during the IOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
644077	4.4.2.4	Develop SW Test Procedures	This covers the CPCI BSTATR during the IOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing setups and environment data to be collected.
644078	4.4.2.4	Support Test and Verification	This covers the CPCI BSTATR during the IOC phase and includes the activities of the the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
644079	4.4.2.4	Prepare Test Reports	This covers the CPI BSTATR during the IOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
644082	4.4.2.5	CPCI Listings As-built	This covers the CPCI BSTATR during the IOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644083	4.4.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BSTATR during the IOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).
644085	4.4.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BSTATR during the IOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
644100	4.4.2.2	Prepare Build-to Part II Specs, and Conduct Internal Design Review	This covers the CPCI BMMGMT during the IOC phase and includes the preparation of the CPCI Part II specification or the "built-to" specification (CDRL #142) and participation in internal design reviews.
644101	4.4.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BMMGMT during the IOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
644102	4.4.2.2	Prepare CPCI Test Plan (Final) - Appendix for BMMGMT	This covers the CPCI BMMGMT during the IOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
644103	4.4.2.3	Code and Unit Test	This covers the CPCI BMMGMT during the IOC phase and includes the development of source code at the module level, its unit test and debug.
644104	4.4.2.3	Integrate and Test to CPC Level	This covers the CPCI BMMGMT during the IOC phase and includes the SW development activities to integrate and test modules up to CPC level.

71

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644105	4.4.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BMMGMT during the IOC phase and includes the formal testing by the T&V group. This testing consists of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
644106	4.4.2.4	Develop SW Test Procedures	This covers the CPCI BMMGMT during the IOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
644107	4.4.2.4	Support Test and Verification	This covers the CPCI BMMGMT during the IOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
644108	4.4.2.4	Prepare Test Reports	This covers the CPCI BMMGMT during the IOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
644110	4.4.2.5	CPCI Listings As-built	This cover the CPCI BMMGMT during the IOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
644114	4.4.2.2	Prepare Build-to Part II Specs. and Conduct Internal Design Reviews	This covers the CPCI BCCNTR during the IOC phases and includes the preparation of the CPCI Part II specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644115	4.4.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BCCNTR during the IOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
644116	4.4.2.2	Prepare CPCI Test Plan (Final) - Appendix for BCCNTR	This covers the CPCI BCCNTR during the IOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
644117	4.4.2.3	Code and Unit Test	This covers the CPCI BCCNTR during the IOC phase and includes the development of source code at the module level, its unit test and debug.
644118	4.4.2.3	Integrate and Test to CPC Level	This covers the CPCI BCCNTR during the IOC phase and includes the SW development activities to integrate and test modules up to CPC level.
644119	4.4.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BCCNTR during the IOC phase and includes the formal testing by the T&V group. This testing consists of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
644120	4.4.2.4	Develop SW Test Procedures	This covers the CPCI BCCNTR during the IOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644121	4.4.2.4	Support Test and Verification	This covers the CPCI BCCNTR during the IOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
644122	4.4.2.4	Prepare Test Reports	This covers the CPCI BCCNTR during the IOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
644123	4.4.2.5	Prepare Inputs to User, Operator, and Data Base Administration Manuals	This covers the CPCI BCCNTR during the IOC phase and includes the preparation of inputs to Users Manual (CDRL #135), Operators Manual (CDRL #136), and Data Base Administrators Manual (CDRL #137).
644124	4.4.2.5	CPCI Listings As-built	This covers the CPCI BCCNTR during the IOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
644126	4.4.2.5	Prepare Inputs to Training Manuals	This covers the CPCI BCCNTR during the IOC phase and includes the preparation inputs to the various training manuals.
644127	4.4.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BCCNTR during the IOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644128	4.4.2.2	Prepare Build-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BQUERY during the IOC phase and includes the preparation of the CPCI Part II specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.
644129	4.4.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BQUERY during the IOC phases and includes the preparation of the preliminary programmers Manual (CDRL #138).
644130	4.4.2.2	Prepare CPCI Test Plan (Final) - Appendix for BQUERY	This covers the CPCI BQUERY during the IOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
644131	4.4.2.3	Code and Unit Test	This covers the CPCI BQUERY during the IOC phase and includes the development of source code at the module level, its unit test and debug.
644132	4.4.2.3	Integrate and Test to CPC Level	This covers the CPCI BQUERY during, the IOC phase and includes the SW development activities to integrate and test modules up to CPC level.
644133	4.4.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BQUERY during the IOC phase and includes the formal testing by the T&V group. This testing consists of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
644134	4.4.2.4	Develop SW Test Procedures	This covers the CPCI BQUERY during the IOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644135	4.4.2.4	Support Test and Verification	This covers the CPCI BQUERY during the IOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
644136	4.4.2.4	Prepare Test Reports	This covers the CPCI BQUERY during the IOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
644137	4.4.2.5	Prepare Inputs to User, Operator and Data Base Administration Manuals	This covers the CPCI BQUERY during the IOC phase and includes the preparation of inputs to Users Manual (CDRL #135), Operators Manual (CDRL #136), and Data Base Administrators Manual (CDRL #137).
644138	4.4.2.5	CPCI Listings As-built	This covers the CPCI BQUERY during the IOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
644139	4.4.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BQUERY during the IOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).
644140	4.4.2.5	Prepare Inputs to Training Manuals	This covers the CPCI BQUERY during the IOC phase and includes preparation inputs to the various training manuals.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644141	4.4.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BQUERY during the IOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
644142	4.4.2.2	Prepare Build-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BAPPLS during the IOC phase and includes the preparation of the CPCI Part II specification or the "build-to" specification (CDRL #142) and participation in internal design reviews.
644143	4.4.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BAPPLS during the IOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
644144	4.4.2.2	Prepare CPCI Test Plan (Final) - Appendix for BAPPLS	This covers the CPCI BAPPLS during the IOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
644145	4.4.2.3	Code and Unit Test	This covers the CPCI BAPPLS during the IOC phase and includes the development of source code at the module level, its unit test and debug.
644146	4.4.2.3	Integrate and Test to CPC Level	This covers the CPCI BAPPLS during the IOC phase and includes the SW development activities to integrate and test modules up to CPC level.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644147	4.4.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BAPPLS during the IOC phase and includes the formal testing by the T&V group. This testing consists of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interface with other CPCI's.
644148	4.4.2.4	Develop SW Test Procedures	This covers the CPCI BAPPLS during the IOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
77 644149	4.4.2.4	Support Test and Verification	This covers the CPCI BAPPLS during the IOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
644150	4.4.2.4	Prepare Test Reports	This covers the CPCI BAPPLS during the IOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
644152	4.4.2.5	CPCI Listings As-built	This covers the CPCI BAPPLS during the IOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150)
644153	4.4.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BAPPLS during the IOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644154	4.4.2.5	Prepare Inputs to Training Manuals	This covers the CPCI BAPPLS during the IOC phase and includes the preparation inputs to various training manuals.
644155	4.4.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BAPPLS during the IOC phase and includes the preparation of the the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
644156	4.4.2.2	Prepare Build-to Part II Specs. and Conduct Internal Reviews	This covers the CPCI BDMAPS during the IOC phase and includes the preparation of the CPCI Part II specification or the "built-to" specification (CDRL #142) and participation in internal design reviews.
644157	4.4.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BDMAPS during the IOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
644158	4.4.2.2	Prepare CPCI Test Plan (Final) - Appendix for <u>BDMAPS</u>	This covers the CPCI BDMAPS during the IOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
644159	4.4.2.3	Code and Unit Test	This covers the CPCI BDMAPS during the IOC phase and includes the development of source code at the module level, its unit test and debug.
644160	4.4.2.3	Integrate and Test to CPC Level	This covers the CPCI BDMAPS during the IOC phase and includes the SW development activities to integrate and test modules up to CPC level.

79

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644161	4.4.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BDMAPS during the IOC phase and includes the formal testing by the T&V group. This testing consists of PQT testing of CPC/Ships and FQT testing of complete CPCI's and its interface with other CPCI's.
644162	4.4.2.4	Develop SW Test Procedure	This covers the CPCI BDMAPS during the IOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
644163	4.4.2.4	Support Test and Verification	This covers the CPCI BDMAPS during the IOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
644164	4.4.2.4	Prepare Test Reports	This covers the CPCI BDMAPS during the IOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
644166	4.4.2.5	CPCI Listings As-built	This covers the CPCI BDMAPS during the IOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150)
644167	4.4.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BDMAPS during the IOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
644168	4.4.2.5	Prepare Inputs to Training Manuals	This covers the CPCI BDMAPS during the IOC phase and includes the preparation inputs to various training manuals.
644169	4.4.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BAPPLS during the IOC phase and includes the preparation of the the "as-built" version of the CPCI Part II specs (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
644170	4.4.2.2	Prepare Build-to Part II Specs. and Conduct Internal Reviews	This covers the CPCI BTTDEV during the IOC phase and includes the preparation of the CPCI Part II Specification or the "built-to" specification (CDRL #142) and participation in internal design reviews.
644171	4.4.2.2	Prepare (Prelim) Programmers Manual	This covers the CPCI BTTDEV during the IOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
644172	4.4.2.2	Prepare CPCI Test Plan (Final) - Appendix for <u>BTTDEV</u>	This covers the CPCI BTTDEV during the IOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
644173	4.4.2.3	Code and Unit Test	This covers the CPCI BTTDEV during the IOC phase and includes the development of source code at the module level, its unit test and debug.
644174	4.4.2.3	Integrate and Test to CPC Level	This covers the CPCI BTTDEV during the IOC phase and includes the SW development activities to integrate and test modules up to CPC level.

	<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
	644175	4.4.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BTTDEV during the IOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Ships and FQT testing of complete CPCI's and its interface with other CPCI's.
	644176	4.4.2.4	Develop SW Test Procedure	This covers the CPCI BTTDEV during the IOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
18	644177	4.4.2.4	Support Test and Verification	This covers the CPCI BTTDEV during the IOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
	644178	4.4.2.4	Prepare Test Reports	This covers the CPCI BTTDEV during the IOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
	644180	4.4.2.5	CPCI Listings As-built	This covers the CPCI BTTDEV during the IOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150)
	644181	4.4.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BTTDEV during the IOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644182	4.4.2.5	Prepare Inputs to Training Manuals	This covers the CPCI BTTDEV during the IOC phase and includes the preparation inputs to various training manuals.
644183	4.4.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BTTDEV during the IOC phase and includes the preparation of the the "as-built" version of the CPCI Part II specs (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
644184	4.4.2.2	Prepare Build-to Part II Specs. and Conduct Internal Reviews	This covers the CPCI WAPPLS during the IOC phase and includes the preparation of the CPCI Part II Specification or the "built-to" specification (CDRL #142) and participation in internal design reviews.
644185	4.4.2.2	Prepare (Prelim) Programmers Manual	This covers the CPCI WAPPLS during the IOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
644186	4.4.2.2	Prepare CPCI Test Plan (Final) - Appendix for WAPPLS	This covers the CPCI WAPPLS during the IOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
644187	4.4.2.3	Code and Unit Test	This covers the CPCI WAPPLS during the IOC phase and includes the development of source code at the module level, its unit test and debug.
644188	4.4.2.3	Integrate and Test to CPC Level	This covers the CPCI WAPPLS during the IOC phase and includes the SW development activities to integrate and test modules up to CPC level.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644189	4.4.2.4	Test at the CPC and CPCI Levels	This covers the CPCI WAPPLS during the IOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Ships and FQT testing of complete CPCI's and its interface with other CPCI's.
644190	4.4.2.4	Develop SW Test Procedure	This covers the CPCI WAPPLS during the IOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
644191	4.4.2.4	Support Test and Verification	This covers the CPCI WAPPLS during the IOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
644192	4.4.2.4	Prepare Test Reports	This covers the CPCI WAPPLS during the IOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
644193	4.4.2.5	Prepare Inputs to user, Operator and Data Base Administration Manuals	This covers the CPCI WAOOKS during the IOC phase and includes the preparation of inputs to Users Manual (CDRL #135), Operators Manual (CDRL #136), and Data Base Adminstrator Manual (CDRL #137).
644194	4.4.2.5	CPCI Listings As-built	This covers the CPCI WAPPLS during the IOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150)

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644195	4.4.2.5	Prepare Programmers Manual (Final)	This covers the CPCI WAPPLS during the IOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).
644196	4.4.2.5	Prepare Inputs to Training Manuals	This covers the CPCI WAPPLS during the IOC phase and includes the preparation inputs to various training manuals.
644197	4.4.2.5	Prepare As-Built Part II Specs.	This covers the CPCI WAPPLS during the IOC phase and includes the preparation of the the "as-built" version of the CPCI Part II specs (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
644203	4.4.2.4	Test at the CPC and CPCI Levels	This covers the CPCI BEXSUP during the IOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Ships and FQT testing of complete CPCI's and its interface with other CPCI's.
644204	4.4.2.4	Develop SW Test Procedure	This covers the CPCI BEXSUP during the IOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
644205	4.4.2.4	Support Test and Verification	This covers the CPCI BEXSUP during the IOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
644206	4.4.2.4	Prepare Test Reports	This covers the CPCI BEXSUP during the IOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
245000	4.5	Software Development (FOC)	This covers the software development effort during the FOC phase and includes the following functions: management, preliminary design, critical design, development, test, and documentation.
645001	4.5.1	Manage All SW Development	This covers the efforts of record and third level management functions required to manage the SW development tasks in the FOC phase.
645004	4.5.1	SW Architecture	Covers the effort required to ensure SW architectural integrity during the FOC phase.
645005	4.5.1	Technical Support to Sub-contract Management	Covers the software development effort required to support Subcontract Management to ensure technical oversight during the FOC phase.
645008	4.5.1	Library Control	Covers the performance of routine source library maintenance/control activities during the FOC phase.
645009	4.5.1	SW Builds and Releases	Perform software builds and maintains software version control/documentation. Maintain hard copy control. This element covers the FOC phase.

98

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
645010	4.5.1	Provide Inputs to Segment Development Plan	Prepares and maintains the software section of the Segment Development Plan during the FOC phase.
645013	4.5.1	Data Base Package	This covers the preparation of the Data Base Package (CDRL #151) which defines the actual entries to be used for initializing each data base item. This element covers the FOC phase.
645014	4.5.1	Data Base Support to Development and Test and Verification	This effort includes the Data Base Administration function and production of the final version of the Data Base Administration Manual (CDRL #137) during the FOC base.
645015	4.5.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BMMGMT during the FOC phase and includes the preparation of the CPCI Part II specification or the "built-to" specification (CDRL #142) and participation in internal design reviews.
645016	4.5.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BMMGMT during the FOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
645017	4.5.2.2	Prepare CPCI Test Plan (Final) - Appendix for BMMGMT	This covers the CPCI BMMGMT during the FOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
645018	4.5.2.3	Code and Unit Test	This covers the CPCI BMMGMT during the FOC phase and includes the development of source code at the module level, its unit test and debug.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
645019	4.5.2.3	Integrate and Test to CPC Level	This covers the CPCI BMMGMT during the FOC phase and includes the SW development activities to integrate and test modules up to CPC level.
645020	4.5.2.4	Test at the CPC and CPCI Levels	This covers BMMGMT during the FOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/String and FQT testing of complete CPCI's and its interface with other CPCI's.
645021	4.5.2.4	Develop SW Test Procedures	This covers the CPCI BMMGMT during the FOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
645022	4.5.2.4	Support Test and Verification	This covers the CPCI BMMGMT during the FOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
645023	4.5.2.4	Prepare Test Reports	This covers the CPCI BMMGMT during the FOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
645024	4.5.2.5	Prepare Inputs to User, Operator and Data Base Administration Manuals	This covers the CPCI BMMGMT during the FOC phase and includes the preparation of inputs to Users Manual (CDRL #135), Operators Manual (CDRL #136), and Data Base Administrators Manual (CDRL #137).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
645025	4.5.2.5	CPCI Listings As-built	This covers the CPCI BMMGMT during the FOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
645026	4.5.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BMMGMT during the FOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).
645027	4.5.2.5	Prepare Inputs to Training Manuals	This covers the CPCI BMMGMT during the FOC phase and includes the preparation inputs to the various training manuals.
645028	4.5.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BMMGMT during the FOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
645029	4.5.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BCCNTR during the FOC phase and includes the preparation of the CPCI Part II Specification or the "built-to" specification (CDRL #142) and participation in internal design reviews.
645030	4.5.2.2	Prepare (Prelim) Programmers Manual	This covers the CPCI BCCNTR during the FOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).
645031	4.5.2.2	Prepare CPCI Test Plan (Final) - Appendix for BMMGMT	This covers the CPCI BCCNTR during the FOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
645032	4.5.2.3	Code and Unit Test	This covers the CPCI BCCNTR during the FOC phase and includes the development of source code at the module level, its unit test and debug.
645033	4.5.2.3	Integrate and Test to CDC Level	This covers the CPCI BCCNTR during the FOC phase and includes the SW development activities to integrate and test modules up to CPC level.
645034	4.5.2.4	Test at the CPC and CPCI Levels	This covers CPCI BCCNTR during the FOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/Strings and FQT testing of complete CPCI's and its interfaces with other CPCI's.
645035	4.5.2.4	Develop SW Test Procedures	This covers the CPCI BCCNTR during the FOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
645036	4.5.2.4	Support Test and Verification	This covers the CPCI BCCNTR during the FOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
645037	4.5.2.4	Prepare Test Reports	This covers the CPCI BCCNTR during the FOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
645038	4.5.2.5	Prepare Inputs to User, Operator and Data Base Administration Manuals	This covers the CPCI BCCNTR during the FOC phase and includes the preparation of inputs to Users Manual (CDRL #135), Operators Manual (CDRL #136), and Data Base Administrators Manual (CDRL #137).
645039	4.5.2.5	CPCI Listings As-built	This covers the CPCI BCCNTR during the FOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
645040	4.5.2.5	Prepare Programmers Manual (Final)	This covers the CPCI BCCNTR during the FOC phase and includes the preparation of final version of the Programmers Manual (CDRL #138).
645042	4.5.2.5	Prepare As-Built Part II Specs.	This covers the CPCI BCCNTR during the FOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs. (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
645043	4.5.2.2	Prepare Built-to Part II Specs. and Conduct Internal Design Review	This covers the CPCI BTTDEV during the FOC phase and includes the preparation of the CPCI Part II specification, or the "built-to" specification (CDRL #142) and participation in internal design reviews.
645044	4.5.2.2	Prepare (Prelim.) Programmers Manual	This covers the CPCI BTTDEV during the FOC phase and includes the preparation of the preliminary Programmers Manual (CDRL #138).

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
645045	4.5.2.2	Prepare CPCI Test Plan (Final) - Appendix for BTTDEV	This covers the CPCI BTTDEV during the FOC phase and includes the preparation of the final CPCI Test Plan (CDRL #131).
645046	4.5.2.3	Code and Unit Test	This covers the CPCI BTTDEV during the FOC phase and includes the development of source code at the module level, its unit test and debug.
645047	4.5.2.3	Integrate and Test to CPC Level	This covers the CPCI BTTDEV during the FOC phase and includes the SW development activities to integrate and test modules up to CPC level..
645048	4.5.2.4	Test at the CPC and CPCI Levels	This covers CPCI BTTDEV during the FOC phase and includes the formal testing by the T&V group. This testing consist of PQT testing of CPC/String and FQT testing of complete CPCI's and its interface with other CPCI's.
645049	4.5.2.4	Develop SW Test Procedures	This covers the CPCI BTTDEV during the FOC phase and includes procedures describing test cases and acceptance criteria. Also includes detailed testing steps and environment data to be collected.
645050	4.5.2.4	Support Test and Verification	This covers the CPCI BTTDEV during the FOC phase and includes the activities of the SW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
645051	4.5.2.4	Prepare Test Reports	This covers the CPCI BTTDEV during the FOC phase and includes activities by the T&V group to prepare formal test reports on results of PQT/FQT testing.
645052	4.5.2.5	Prepare Inputs to User, Operator and Data Base Administration Manuals	This covers the CPCI BTTDEV during the FOC phase and includes the preparation of inputs to Users Manual (CDRL #135), Operators Manual (CDRL #136), and Data Base Administrators Manual (CDRL #137).
645053	4.5.2.5	CPCI Listings As-built	This covers the CPCI BTTDEV during the FOC phase and includes the listing of source instruction statements and object code for all CPC forming the CPCI (CDRL #150).
645056	4.5.2.5	Prepare As-Built Part II Specs	This covers the CPCI BTTDEV during the FOC phase and includes the preparation of the "as-built" version of the CPCI Part II specs (CDRL #142). The "as-built" version defines the exact configuration of accepted computer programs.
246000	4.6	Hardware Development	This category covers the hardware development effort and includes: management, preliminary design, critical design, development test and documentation functions.
646100	4.6.1	Manage All Hardware Development	This covers the efforts of second and third level management required in order to manage the hardware development tasks in the BOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
646200	4.6.2.1	Accomplish (Prelim.) CI Design and Reports Analysis and Allocation	This covers the CI BASIC IWS during the BOC phase and includes the design effort which provides for analysis of the Segment Design Spec. functions and performance and their allocation to individual CI's. This effort occurs after completion of the Design Concept Review and leads to generating of the CI spec.
646203	4.6.2.2	Accomplish Detailed Design of CI	This covers the CI BASIC IWS during the BOC phase and includes the effort, following PDR approval which provides for detailed design including identification of all components and assemblies.
646206	4.6.2.3	Accomplish Fabrication of All Manufactured HW	This covers the CI BASIC IWS during the BOC phase and includes the effort, following CDR approval, to set up a manufacturing line including tooling and test equipment, procure components, and accomplish the manufacture and unit test and checkout of the integrated work stations.
646212	4.6.2.4	Prepare Hardware Test and TEMPEST Test Procedures	This covers the CI BASIC IWS during the BOC phase and includes the effort, based on approved Segment Test Plan, to prepare detailed test procedures describing test cases and acceptance criteria. Also included is the effort to test to TEMPEST qualify all solution.
646253	4.6.2.5	Prepare Equipment Operation and Maintenance Manuals	This covers the CI BASIC IWS during the BOC phase and includes the preparation of the Equipment Operation and Maintenance Manuals (CDRL #148).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
646217	4.6.2.1	Accomplish (Prelim.) CI Design and Reports Analysis and Allocation	This covers the CI Enhanced IWS during the BOC phase and including the design effort which provides for analysis of the Segment Design Spec functions and performance and their allocation to individual CI's. This effort occurs after completion of the Design Concept Review and leads to generating of the CI spec.
646218	4.6.2.1	Prepare CI Specification and Conduct Internal Design Reviews	This covers the CI Enhanced IWS during the BOC phase and includes the preparation of the CI Specification (CDRL #143) and the performance of internal design reviews.
646221	4.6.2.2	Prepare Built-to Component Specs and Conduct Internal Design Review	This covers the CI Enhanced IWS during the BOC phase and includes the effort, following PDR approval, which provides for the generation of build-to component specs and the performance of internal design reviews.
646231	4.6.2.4	Support Test and Verification	This covers the CI Enhanced IWS during the BOC phase and includes the activities of the HW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
646232	4.6.2.5	Prepare Equipment Operation and Maintenance Manuals	This covers the CI Enhanced IWS during the BOC phase and includes the preparation of the Equipment Operation and Maintenance Manuals (CDRL #148).

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
646233	4.6.2.5	Prepare Inputs to Segment/ System Operation and User Manuals	This covers the CI Enhanced IWS during the BOC phase and includes the preparation of inputs to the Segment/System Operation and User Manuals (CDRL #136 and CDRL #135 respectively).
646234	4.6.2.5	Prepare Inputs to Training Manuals	This covers the CI Enhanced IWS during the BOC phase and includes the preparation of inputs to the various training manuals (CDRL #146).
647100	4.7.1	Manage All Hardware Development	This covers the efforts of second and third level management required in order to manage the hardware development tasks in the IOC phase.
647222	4.7.2.3	Prepare Manufacturing Drawing Packages	This covers the CI Enhanced IWS during the IOC phase and includes the preparation of manufacturing drawing packages.
647226	4.7.2.4	Support Test and Verification	This covers the CI Enhanced IWS during the IOC phase and includes the activities of the HW Development group to support all formal tests by the T&V group up to acceptance. Also includes all problem analysis and error correction.
647230	4.7.2.2	Accomplish Detailed Design of CI	This covers the CI Full Capability IWS during the IOC phase and includes the effort, following PDR approval which provides for detailed design, including identification of all components and assemblies.

96

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
647231	4.7.2.2	Prepare Built-to Component Specs. and Conduct Internal Design Review	This covers the CI Full Capability IWS during the IOC phase and includes the effort, following PDR approval, which provides for the generation of build-to component specs and the performance of internal design reviews.
647232	4.7.2.2	Accomplish Critical Design of Commercial Product Modification	This covers the CI Full Capability IWS during the IOC phase and includes the engineering effort to analyze and design any D/C segment peculiar modifications to commercial products used in the work station configuration.
647242	4.7.2.5	Prepare Equipment Operation and Maintenance Manuals	This covers the CI Full Capability IWS during the IOC phase and includes the preparation of the Equipment Operation and Maintenance Manuals (CDRL #148).
648100	4.8.1	Manage All Hardware Development	This covers the efforts of second and third level management required to manage the hardware development tasks in the FOC phase.
648232	4.8.2.2	Accomplish Critical Design of Commercial Product Modifications	This covers the CI Full Capability IWS during the FOC phase and includes the engineering effort to analyze and design any D/C segment peculiar modifications to commercial products used in the work station configuration.
249000	4.9	Automated Data Processing Equipment (ADPE) Hardware and Software	This category covers the acquisition of all ADPE, the acceptance testing of ADPE, and the modification, installation, testing and maintenance of GFE.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
649100	4.9.1	Manage All ADPE Procurement Activities	This covers the second and third level management of all the activities associated with the ADPE category during the BOC phase.
649101	4.9.1	Manage All ADPE Procurement Activities	This covers the second and third level management of all the activities associated with the ADPE category during the IOC phase.
649102	4.9.1	Manage All ADPE Procurement Activities	This covers the second and third level management of all the activities associated with the ADPE category during the FOC phase.
97 649103	4.9.1	Provide and Enforce All Procurement Practices, Standards and Conventions	This covers the management activities associated with providing and enforcing all procurement practices, standards, and conventions during the BOC phase.
649104	4.9.1	Provide and Enforce All Procurement Practices, Standards and Conventions	This covers the management activities associated with providing and enforcing all procurement practices, standards, and conventions during the IOC phase.
649105	4.9.1	Provide and Enforce All Procurement Practices, Standards and Conventions	This covers the management activities associated with providing and enforcing all procurement practices, standards, and conventions during the FOC phase.
649106	4.9.1	Project Labor to Support Procurement	This covers the effort by the SW Development group to provide support in the procurement of commercial CPCI's. This element covers the BOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
649107	4.9.1	Project Labor to Support Procurement	This covers the effort by the SW Development group to provide support in the procurement of commercial CPCI's. This element covers the IOC phase.
649108	4.9.1	Project Labor to Support Procurement	This covers the effort by the SW Development group to provide support in the procurement of commercial CPCI's. This element covers the FOC phase.
649109	4.9.1	Procurement	This covers the monthly licensing and service costs of commercial CPCI's during the BOC phase, prior to commencement of the BOC O&M period.
649110	4.9.1	Procurement	This covers the monthly licensing and service costs of commercial CPCI's during the IOC phase, prior to commencement of the IOC O&M period.
649111	4.9.1	Procurement	This covers the monthly licensing and service costs of commercial CPCI's during the FOC phase, prior to commencement of the FOC O&M period.
649112	4.9.1	Project Labor to Support Procurement	This covers the effort by the System Engineering group to provide support in the procurement of commercial CI's during the BOC phase.
649113	4.9.1	Project Labor to Support Procurement	This covers the effort by the System Engineering group to provide support in the procurement of commercial CI's during the IOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
649115	4.9.1	Procure	This covers the purchase cost of commercial CI's during the BOC phase, prior to commencement of the BOC O&M period.
649116	4.9.1	Procure	This covers the purchase cost of commercial CI's during the IOC phase, prior to commencement of the IOC O&M period.
649300	4.9.3	Install and Checkout GFE	This covers the effort to install and checkout GFE during the BOC phase. Principle item is the Local Area Network equipment installed at the development facility.
649301	4.9.3	Provide GFE Maintenance	This covers the effort to provide maintenance of GFE during the BOC phase.
649303	4.9.3	Provide GFE Maintenance	This covers the effort to provide maintenance of GFE during the FOC phase.
241000	4.10	Test and Verification	This covers the formal and informal testing of software, hardware, and system components that make up the D/C Segment. Included in this element are the following: test management, test support, integration test, and factory pre-ship test. All test and verification activities will be conducted at the development site.
641010	4.10.1	Provide Management of Segment Test Activities	This covers the technical management of the segment test activities during the BOC phase.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
641011	4.10.1	Prepare Test Plans	This is the activity to write detailed Test Plan (CDRL #131) covering all formal T&V steps at the development site during the BOC phase.
641012	4.10.1	Prepare Test Procedures	This is the effort required to develop test procedures and covers test cases for hardware subsystem test and site installation and checkout. Also included are hardware/software integration, and site tests including acceptance tests. This element covers the BOC phase.
641013	4.10.1	Prepare Test Plan for GFE Equipment	This covers the effort required to write detailed test plans for the UNIVAC 1100/81, GFE test, and Local Area Network communication interface during the BOC phase.
641020	4.10.2	Provide Necessary Software to Support Integrated Testing	This covers TPNS script generation for hardware/software integration and stress testing during the BOC phase.
641021	4.10.2	Provide Necessary Hardware to Support Integrated Testing	This covers the effort to plan and provide test configuration and the integration of the test computer and LAN for execution of TPNS during the BOC phase.
641022	4.10.2	Provide Necessary Data to Support Integrated Testing	This covers the effort to provide data to be used in support of the testing efforts detailed in 641020 and 641021. This element covers the BOC phase.
641030	4.10.3	Accomplish Inter-CPCI Testing	This covers the checkout and verification of integrated CPCI's using external interface simulators during the BOC phase.

101

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641031	4.10.3	Accomplish Inter-CI Testing	This is the checkout and debug of the CI interfaces (processor, LAN, IWS) with diagnostic software during the BOC phase.
641032	4.10.3	Accomplish Integrated CPCI/ CI Testing	This covers stress testing the integrated hardware/software system with the test computer and TPNS scripts during the BOC phase.
641033	4.10.3	Provide Integration Test Reports	This is the effort to prepare reports of the results of tests performed on the integrated CPCI's during the BOC phase.
641040	4.10.4	Perform Formal Preship Test	This covers the final preship test including factory acceptance witnessed by the Government and support to CM audit during the BOC phase.
641041	4.10.4	Provide Preship Test Report	This covers the factory acceptance test report during the BOC phase.
641110	4.11.1	Provide Management of Segment Test Activities	This covers the technical management of the Segment Test activities during the IOC phase.
641111	4.11.1	Prepare Test Plans	This is the activity to write detailed Test Plan (CDRL #131) covering all formal T&V steps at the development site during the IOC phase.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
641112	4.11.1	Prepare Test Procedures	This is the effort required to develop test procedures and covers test cases for hardware subsystem test and site installation and checkout. Also included are hardware/software integration, and site tests including acceptance tests. This element covers the IOC phase.
641113	4.11.1	Prepare Test Plan for GFE Equipment	This covers the effort required to write detailed test plans for the UNIVAC 1100/81, GFE test, and Local Area Network communication interface during the IOC phase.
641120	4.11.2	Provide Necessary Software to Support Integrated Testing	This covers TPNS script generation for hardware/software integration and stress testing during the IOC phase.
641121	4.11.2	Provide Necessary Hardware to Support Integrated Testing	This covers the effort to plan and provide test configuration and the integration of the test computer and LAN for execution of TPNS during the IOC phase.
641122	4.11.2	Provide Necessary Data to Support Integrated Testing	This covers the effort to provide data to be used in support of the testing efforts detailed in 641120 and 641121. This element covers the IOC phase.
641130	4.11.3	Accomplish Inter-CPCI Testing	This covers the checkout and verification of integrated CPCI's using external interface simulators during the IOC phase.
641131	4.11.3	Accomplish Inter-CI Testing	This is the checkout and debug of the CI interfaces (processor, LAN, IWS) with diagnostic software during the IOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641132	4.11.3	Accomplish Integrated CPCI/ CI Testing	This covers stress testing the integrated hardware/software system with the test computer and TPNS scripts during the IOC phase.
641133	4.11.3	Provide Integration Test Reports	This is the effort to prepare reports of the results of tests performed on the integrated CPCI's during the IOC phase.
641140	4.11.4	Perform Formal Preship Test	This covers the final preship test including factory acceptance witnessed by the Government and support to CM audit during the IOC phase.
641141	4.11.4	Provide Preship Test Report	This covers the factory acceptance test report during the IOC phase.
641210	4.12.1	Provide Management of Segment Test Activities	This covers the technical management of the Segment Test activities during the FOC phase.
641211	4.12.1	Prepare Test Plans	This is the activity to write detailed Test Plan (CDRL #131) covering all formal T&V steps at the development site during the FOC phase.
641212	4.12.1	Prepare Test Procedures	This is the effort required to develop test procedures and covers test cases for hardware subsystem test and site installation and checkout. Also included are hardware/software integration, and site tests including acceptance tests. This element covers the FOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641220	4.12.2	Provide Necessary Software to Support Integrated Testing	This covers TPNS script generation for hardware/software integration and stress testing during the FOC phase.
641221	4.12.2	Provide Necessary Hardware to Support Integrated Testing	This covers the effort to plan and provide test configuration and the integration of the test computer and LAN for execution of TPNS during the FOC phase.
641222	4.12.2	Provide Necessary Data to Support Integrated Testing	This covers the effort to provide data to be used in support of the testing efforts detailed in 641220 and 641221. This element covers the FOC phase.
641230	4.12.3	Accomplish Inter-CPCI Testing	This covers the checkout and verification of integrated CPCI's using external interface simulators during the FOC phase.
641231	4.12.3	Accomplish Inter-CI Testing	This is the checkout and debug of the CI interfaces (processor, LAN, IWS) with diagnostic software during the FOC phase.
641232	4.12.3	Accomplish Integrated CPCI/CI Testing	This covers stress testing the integrated hardware/software system with the test computer and TPNS scripts during the FOC phase.
641233	4.12.3	Provide Integration Test Reports	This is the effort to prepare reports of the results of tests performed on the integrated CPCI's during the FOC phase.
641240	4.12.4	Perform Formal Preship Test	This covers the final preship test including factory acceptance witnessed by the Government and support to CM audit during the FOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
241300	4.13	Installation, Checkout and Test	This covers all efforts at the operational site to provide management, planning of and installation, checkout and test. Includes segment acceptance test and support to the SI to perform Inter-Segment Demos and Program Demos.
641310	4.13.1	Provide Management of Installation and Checkout Activities	This is the technical management at the operational site of all installation and checkout activities during the BOC phase.
641320	4.13.2	Provide Facility Interface Drawings/Requirements	This covers the preparation of the Facility IDRS (CDRL #139) including the floor plan for equipment installation during the BOC phase.
641321	4.13.2	Provide Facility Planning	This is the analysis and coordination required for the equipment installation during the BOC phase.
641330	4.13.3	Prepare Segment Shipping Plan	This covers the preparation of the Shipping Plan (CDRL #147) and includes instruction covering the packaging, and shipping of the equipment during the BOC phase.
641331	4.13.3	Prepare Segment Installation Plan	This covers the preparation of the Segment Installation Plan (CDRL #134) and covers the instruction on the physical installation of the equipment on a non-interference basis. This element covers the BOC phase.
641332	4.13.3	Provide for Shipment, Installation and Checkout of All Segment Items	This covers the physical shipment of the equipment and checkout of all the segment items during the BOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641333	4.13.3	Accomplish Segment Integration and Transition to Operational Status	This covers the effort required to perform diagnostic test on the equipment to ensure operational readiness during the BOC phase.
641340	4.13.4	Perform Formal Site Segment Test	This is the rebaselining of the hardware/software system and includes the performance of installation and checkout tests and procedures and concludes with formal acceptance. This element covers the BOC phase.
641341	4.13.4	Provide Site Segment Test Report	This covers the preparation of the Segment Test Reports (CDRL #154) which covers the activities defined in 641340. This element covers the BOC phase.
641350	4.13.5	Contribute to System Test Plan and Test Report to Be Prepared by the SI	This covers the preparation of inputs to SI's Test Plan and subsequent Test Reports during the BOC phase. These inputs constitute CDRL #153 - System Test/Demo Inputs.
641351	4.13.5	Participate In On-Site System Testing	This covers the effort to support the SI conducted on-site system testing during the BOC phase.
641360	4.13.6	Provide Input to Inter-Program Demonstration Plan to be Prepared by the SI	This covers the effort to provide input to SI prepared Test Plan, and Test Procedures employed in the conducting of Inter-Program Demos during the BOC phase.
641361	4.13.6	Support Program Demos	This covers the effort to support the SI conducted Program Demos during the BOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641410	4.14.1	Provide Management of Installation and Checkout Activities	This is the technical management at the operational site of all installation and checkout activities during the IOC phase.
641411	4.14.1	Provide Test Plan	This covers the preparation of Test Plan during the IOC Phase.
641420	4.14.2	Provide Facility Interface Drawings/Requirements	This covers the preparation of the Facility IDRS (CDRL #139) including the floor plan for equipment installation during the IOC phase.
641430	4.14.3	Prepare Segment Shipping Plan	This covers the preparation of the Shipping Plan (CDRL #147) and includes instruction covering the packaging, and shipping of the equipment during the IOC phase.
641431	4.14.3	Prepare Segment Installation Plan	This covers the preparation of the Segment Installation Plan (CDRL #134) and covers the instruction on the physical installation of the equipment on a non-interference basis. This element covers the IOC phase.
641432	4.14.3	Provide for Shipment, Installation and Checkout of All Segment Items	This covers the physical shipment of the equipment and checkout of all the segment items during the IOC phase.
641433	4.14.3	Accomplish Segment Integration and Transition to Operational Status	This covers the effort required to perform diagnostic test on the equipment to ensure operational readiness during the IOC phase.
641440	4.14.4	Perform Formal Site Segment Test	This is the rebaselining of the hardware/software system and includes the performance of installation and checkout tests and procedures and concludes with formal acceptance. This element covers the IOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641441	4.14.4	Provide Site Segment Test Report	This covers the preparation of the Segment Test Reports (CDRL #154) which covers the activities defined in 641440. This element covers the IOC phase.
641450	4.14.5	Contribute to System Test Plan and Test Report to be Prepared by the SI	This covers the preparation of inputs to SI's Test Plan and subsequent Test Reports during the IOC phase. These inputs constitute CDRL #153 - System Test/Demo Inputs.
641460	4.14.6	Provide Input to Inter-Program Demonstration Plan to be Prepared by the SI	This covers the effort to provide input to SI prepared Test Plan, and Test Procedures employed in the conducting of Inter-Program Demos during the IOC phase.
641461	4.14.6	Support Program Demos	This covers the effort to support the SI conducted Program Demos during the IOC phase.
241500	4.15	Installation checkout and Test	This covers all efforts at the operation site to provide management, planning of and installation checkout and test. Includes Segment acceptance test and support to the SI to perform Inter-Segment Demos and Program Demos
641510	4.15.1	Provide Management of Installation and Checkout Activities	This is the technical management at the operational site of all installation and checkout activities during the FOC phase.
641520	4.15.2	Provide Facility Interface Drawings/Requirements	This covers the preparation of the Facility IDRS (CDRL #139) including the floor plan for equipment installation during the FOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641521	4.15.2	Provide Facility Planning	This is the analysis and coordination required for the equipment installation during the FOC phase.
641530	4.15.3	Prepare Segment Shipping Plan	This covers the preparation of the Shipping Plan (CDRL #147) and includes instruction covering the packaging, and shipping of the equipment during the FOC phase.
641531	4.15.3	Prepare Segment Installation Plan	This covers the preparation of the Segment Installation Plan (CDRL #184) and covers the instruction on the physical installation of the equipment on a non-interference basis. This element covers the FOC phase.
641532	4.15.3	Provide for Shipment, Installation and Checkout of All Segment Items	This covers the physical shipment of the equipment and checkout of all the segment items during the FOC phase.
641533	4.15.3	Accomplish Segment Integration and Transition to Operational Status	This covers the effort required to perform diagnostic test on the equipment to ensure operational readiness during the FOC phase.
641540	4.15.4	Perform Formal Site Segment Test	This is the rebaselining of the hardware/software system and includes the performance of installation and checkout tests and procedures and concludes with formal acceptance. This element covers the FOC phase.
641541	4.15.4	Provide Site Segment Test Report	This covers the preparation of the Segment Test Reports (CDRL #154) which covers the activities defined in 641540. This element covers the FOC phase.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
641550	4.15.5	Contribute to System Test Plan and Test Report to be Prepared by the SI	This covers the preparation of inputs to SI's Test Plan and subsequent Test Reports during the IOC phase. These inputs constitute CDRL #153 - System Test/Demo Inputs.
641551	4.15.5	Participate In On-Site System Testing	This covers the effort to support the SI conducted on-site system testing during the FOC phase.
641560	4.15.6	Provide Input to Inter-Program Demonstration Plan to be Prepared by the SI	This covers the effort to provide input to SI prepared Test Plan, and Test Procedures employed in the conducting of Inter-Program Demos during the FOC phase.
641561	4.15.6	Support Program Demos	This covers the effort to support the SI conducted Program Demos during the FOC phase.
241600	4.16	Development and Test Facility	This category covers the effort to define and specify the elements of the Development and Test Facility; to procure and checkout the facility; and to provide the services for operation and maintenance of the facility.
641610	4.16.1	Provide Management, Planning and Control of Development and Test Facility	This covers the management, planning and control of facilities to support the analysis, human engineering, development, test and verification of segment software and hardware during the BOC phase.
641611	4.16.1	Provide Management, Planning and Control of Development and Test Facility	Identical with 641610 except for the IOC phase.

110

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641612	4.16.1	Provide Management, Planning and Control of Development and Test Facility	Identical with 641610 except for the FOC phase.
641622	4.16.2	Develop Necessary Test Tools, etc. for Development and Test Facility	This provides for the development and/or procurement of program products consisting of test drivers, data reduction/analysis programs for test and verification purposes during BOC phase.
641623	4.16.2	Develop Necessary Test Tools, etc. for Development and Test Facility	Identical with 641622 except for IOC phase.
641630	4.16.3	Provide ADPE Capable of Supporting the Development and Test Facility	This covers the lease cost of ADPE needed to support the Development and Test Facility during BOC phase.
641631	4.16.3	Provide ADPE Capable of Supporting the Development And Test Facility	Identical with 641630 except for IOC phase.
641640	4.16.4	Operate the Development and Test Facility	This provides the necessary skills (System Engineers, System Programmers, Computer Operators and Librarians) to operate the Facility during BOC phase.
641641	4.16.4	Operate the Development and Test Facility	Identical with 641640 except for IOC phase.
641643	4.16.4	Maintain the Development and Test Facility	This covers purchase of commercial hardware maintenance and purchase of commercial software product licensing and service for Facility ADPE during BOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641644	4.16.4	Maintain the Development and Test Facility	Identical with 641643 except for IOC phase.
641650	4.16.5	Provide Management, Planning and Control of Subcontractor Development and Test Facilities	This provides management, planning and control of subcontractor facilities to support the analysis, human engineering, development, test and verification of segment software and hardware during the BOC phase.
641651	4.16.5	Provide Management, Planning and Control of Subcontractor Development and Test Facilities	Identical with 641650 except for IOC phase.
641652	4.16.5	Provide Management, Planning and Control of Subcontractor Development and Test Facilities	Identical with 641650 except for FOC phase.
641653	4.16.5	Services	This covers the development and/or procurement of software development tools, library support capabilities and test tools during the BOC phase.
641654	4.16.5	Services	Identical with 641653 except for IOC phase.
641655	4.16.5	Services	Identical with 641653 except for FOC phase.
641656	4.16.5	Equipment	This covers the lease cost of ADPE needed to support the Development and Test Facility during BOC phase.
641657	4.16.5	Equipment	Identical with 641656 except for IOC phase.
641658	4.16.5	Equipment	Identical with 641656 except for FOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641659	4.16.5	Operate Subcontractor Development and Test Facility	This provides the necessary skills (System Engineers, System Programmers, Computer Operators and Librarians) to operate the subcontractor Facility during BOC phase.
64165A	4.16.5	Operate Subcontractor Development and Test Facility	Identical with 641659 except for IOC phase.
64165B	4.16.5	Operate Subcontractor Development and Test Facility	Identical with 641659 except for FOC phase.
64165C	4.16.5	Operate Subcontractor Development and Test Facility	This covers purchase of commercial hardware maintenance and purchase of commercial software product licensing and service for Facility ADPE during the BOC phase.
64165D	4.16.5	Operate Subcontractor Development and Test Facility	Identical with 64165C except for IOC phase.
64165E	4.16.5	Operate Subcontractor Development and Test Facility	Identical with 64165C except for FOC phase.
241700	4.17	Training	This element includes: training management, user training, operator training, and maintenance training.
641710	4.17.1	Manage All Training Activities	This covers the management of all training activities during the BOC phase.
641711	4.17.1	Manage All Training Activities	This covers the management of all training activities during the IOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641712	4.17.1	Manage All Training Activities	This covers the management of all training activities during the FOC phase.
641713	4.17.1	Provide Segment Training Plan	This covers the preparation of the Segment Training Plan (CDRL #140) during the BOC phase.
641714	4.17.1	Provide Segment Training Plan	This covers the preparation of the Segment Training Plan (CDRL #140) during the IOC phase.
641720	4.17.2	Accept Other Segment Inputs and Prepare User Training Materials	This covers the effort required to integrate inputs from other segments into user/operator training materials and to prepare training materials (CDRL #146) during the BOC phase.
641721	4.17.2	Accept Other Segment Inputs and Prepare User Training Materials	This covers the effort required to integrate inputs from other segments into user/operator training materials and to prepare training materials (CDRL #146) during the IOC phase.
641722	4.17.2	Accept Other Segment Inputs and Prepare User Training Materials	This covers the effort required to integrate inputs from other segments into user/operator training materials and to prepare training materials (CDRL #146) during the FOC phase.
641723	4.17.2	Train System Users and Government Instructors	This covers the effort required to train users of the system and Government instructors during the BOC phase.
641724	4.17.2	Train System Users and Government Instructors	This covers the effort required to train users of the system and Government instructors during the IOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641725	4.17.2	Train System Users and Government Instructors	This covers the effort required to train users of the system and Government instructors during the FOC phase.
641730	4.17.3	Prepare and Deliver Operator Training Materials	This covers the preparation and delivery of operator training materials (CDRL #146) during the BOC phase.
641731	4.17.3	Prepare and Deliver Operator Training Materials	This covers the preparation and delivery of operator training materials (CDRL #146) during the IOC phase.
641732	4.17.3	Prepare and Deliver Operator Training Materials	This covers the preparation and delivery of operator training materials (CDRL #146) during the FOC phase.
641733	4.17.3	Train Segment and System Operators and Management Personnel	This covers the effort required to train segment and system operators and management personnel during the BOC phase.
641734	4.17.3	Train Segment and System Operators and Management Personnel	This covers the effort required to train segment and system operators and management personnel during the IOC phase.
641735	4.17.3	Train Segment and System Operators and Management Personnel	This covers the effort required to train segment and system operators and management personnel during the FOC phase.
641740	4.17.4	Prepare and Deliver Maintenance Training Materials	This covers the preparation and delivery of maintenance training materials (CDRL #146) during the BOC phase.
641741	4.17.4	Prepare and Deliver Maintenance Training Materials	This covers the preparation and delivery of maintenance training materials (CDRL #146) during the IOC phase.

<u>IBM WBS NO.</u>	<u>RFP WBS NO.</u>	<u>WBS TITLE</u>	<u>WBS DESCRIPTION</u>
641742	4.17.4	Prepare and Deliver Maintenance Training Materials	This covers the preparation and delivery of maintenance training materials (CDRL #146) during the FOC phase.
641743	4.17.4	Train All Segment Maintenance Personnel	This covers the effort required to train all segment maintenance personnel during the BOC phase.
641744	4.17.4	Train All Segment Maintenance Personnel	This covers the effort required to train all segment maintenance personnel during the IOC phase.
641745	4.17.4	Train All Segment Maintenance Personnel	This covers the effort required to train all segment maintenance personnel during the FOC phase.
241800	4.18	Operations and Maintenance (O&M)	This covers the management and planning and control of O&M activities; the procurement of equipment/services to perform O&M; and the actual execution of O&M services over the specified life of the contract.
641810	4.18.1	Provide O&M Management	This covers the project management needed to manage, plan and control O&M during the BOC phase.
641811	4.18.1	Provide O&M Management	Identical with 641810 except for IOC phase.
641812	4.18.1	Provide O&M Management	Identical with 641810 except for FOC phase.
641813	4.18.1	Provide O&M Project Control	This provides the project schedule and financial monitoring effort to maintain project control including review and periodic reporting to the Government.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
641814	4.18.1	Provide O&M Project Control	Identical with 641812 except for IOC phase.
641815	4.18.1	Provide O&M Project Control	Identical with 641812 except for FOC phase.
641836	4.18.3	Problem Analysis, Error Correction and Update Documentation	This provides system maintenance programmers to perform problem analysis and error correction when software problems arise during BOC phase. Also included is effort to update documentation.
641837	4.18.3	Problem Analysis, Error Correction and Update Documentation	Identical with 641836 except for IOC phase.
641838	4.18.3	Problem Analysis, Error Correction and Update Documentation	Identical with 641836 except for FOC phase.
641839	4.18.3	Test Software Changes	This provides test personnel to test and verify conformance with specification, any software changes made to the Segment during BOC phase.
64183A	4.18.3	Test Software Changes	Identical with 641839 except for IOC phase O&M.
64183B	4.18.3	Test Software Changes	Identical with 641839 except for FOC phase O&M.
64183C	4.18.3	Maintain Commercial Software Products	This covers purchase of commercial software product licensing and service during BOC phase O&M.
64183D	4.18.3	Maintain Commercial Software Products	Identical with 64183C except for IOC phase.

<u>IBM</u> <u>WBS NO.</u>	<u>RFP</u> <u>WBS NO.</u>	<u>WBS</u> <u>TITLE</u>	<u>WBS</u> <u>DESCRIPTION</u>
64183E	4.18.3	Maintain Commercial Software Products	Identical with 64183C except for FOC phase.
641840	4.18.4	Hardware Problem Analysis, Error Correction and Update Documentation	This provides hardware engineers to perform problem analysis and error correction when hardware problems arise during BOC phase O&M. Also included is effort to update documentation.
641841	4.18.4	Hardware Problem Analysis, Error Correction and Update Documentation	Identical with 641840 except for IOC phase.
641842	4.18.4	Hardware Problem Analysis, Error Correction and Update Documentation	Identical with 641840 except for FOC phase.
641843	4.18.4	Maintain Commercial Hardware	This covers purchase of commercial hardware maintenance based on 24 hour per day, 7 day per week on-call maintenance during BOC phase O&M.
641844	4.18.4	Maintain Commercial Hardware	Identical with 641843 except for IOC phase.
641845	4.18.4	Maintain Commercial Hardware	Identical with 641843 except for FOC phase.
641870	4.18.7	Provide Travel and Living Expenses of O&M Personnel	This covers both local and long distance travel and living expense of contractor personnel engaged in performance of BOC phase O&M.
641871	4.18.7	Provide Travel and Living Expenses for O&M Personnel	Identical with 641870 except for IOC phase.